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HISTORY of WAR

AXIS SALLY

WWII's all-American traitor

TANK BUSTERS

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FUTURE

ISSUE 111

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THE NAZI OFFENSIVE into Belgium in December 1944 was a last-ditch gamble by Adolf Hitler that caught the Allies completely by surprise.
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BBA099
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A US soldier passes a knocked-out Hetzer – a German anti-tank SPG – c.December 1944

© Getty

Welcome

Ever since the arrival of tanks on the battlefield, tacticians and engineers have devised ways to stop them in their tracks. From rudimentary rifles to sophisticated missiles, a century of anti-tank warfare has produced some of the most innovative and effective weapons systems ever – this issue you can find a high-calibre tour of this fascinating history. Elsewhere, you'll find the story of Mildred Gillars, better known as Axis Sally, who went from Broadway wannabe to Nazi propagandist. Also this month Edoardo Albert spoke with Dr James Lacey about his new research into the strategies of the Roman Empire – his findings are set to challenge what we think we know about ancient Rome.

Tim Williamson
Editor-in-Chief

CONTRIBUTORS

ALEX BOWERS

This month Alex has taken a look at the story of Mildred Gillars, an American broadcaster who worked for the Nazi propaganda machine during WWII (p.30). On page 52 he recounts the Victoria Cross story of Patrick Porteous during the 1942 Dieppe Raid.

DAVID SMITH

Washington crossing the Delaware River is perhaps one of the most iconic moments in American history, but what happened when he reached the other side? David recounts the decisive Battle of Trenton for this issue's Great Battles (p.36).

MICHAEL HASKEW

This month, *History of War* regular Mike examines the history of anti-tank warfare for our Frontline section. He takes us from the early days of tank busters during WWI to the high-tech modern anti-armour weapon systems of today (p.12).

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A 15th century Burgundian shield

Image: Wiki / PD / Art

WAR in FOCUS

CLASH OF KNIGHTS

26 March 1351

Known as the ‘Combat of the Thirty’, an unusual engagement was fought during the Breton War of Succession. Thirty Franco-Breton knights and squires fought the same number of opponents consisting of 20 Englishmen, six Germans and four Bretons in an arranged fight at Guillac, Brittany. The warriors on both sides were said to have “held themselves valiantly” in a hard-fought battle, with the Franco-Breton faction emerging victorious. Fifteen men were killed altogether, including the English commander.

WAR in FOCUS

TRACTORS AT WAR

28 August 1936

Republican troops perch on a tractor in Barcelona during the Spanish Civil War. In the previous month the city had been subjected to a military rising on 19 July 1936 when Nationalist Spanish Army officers attempted a coup. Barcelona's police forces remained loyal to the Republican Government and defeated the Nationalists with the assistance of anarchists. The latter controlled the city in the aftermath of the rising, with the pictured soldiers being CNT-FAI anarchist militiamen.

© Getty

WAR in FOCUS

USS MISSOURI FIRES

c.1950-53

American battleship USS Missouri fires her main batteries of 16-inch guns at enemy targets off North Korea during the Korean War. Missouri served in the Pacific during WWII, including at the Battles of Iwo Jima and Okinawa. She was also the site of the Japanese surrender in September 1945. The first US battleship to reach Korean waters in September 1950, Missouri participated in the Battle of Inchon, provided UN gunfire support during the Chosin Reservoir Campaign and bombarded the Korean east coast until March 1951.

© Getty

TIMELINE OF...

ANTI-TANK WEAPONS

Over the course of a century, armed forces around the world produce a variety of weapons and devices to counter the evolution of armoured warfare

British soldiers on armoured manoeuvres in Hampshire, England, August 1929

EXPERIMENTAL MECHANISED FORCE 02

Known as the EMF, this British Army initiative investigates and develops the techniques and equipment required for armoured warfare. The first armoured formation in the world, the EMF sometimes eschews anti-tank obstacles, which the Germans carefully observe.

15 September 1916

A British tank advances on the Western Front during WWI

ENTER THE TANK 01

Land warfare changes forever when the British Army deploys the Mk I Tank to fight at the Battle of the Somme. The first tank to go into action, the Mk I and its successors replace cavalry on the battlefield, prompting new measures to counter their significant threat.

1917-18

A German soldier aims his anti-tank rifle over a trench in 1918

GERMAN DEVELOPMENTS

To counter Allied tanks during WWI, German forces experiment with grenade bundles and produce the first anti-tank rifles and artillery guns. Obstacles such as widened craters and various infantry tactics are also developed.

1927-29

1929-38

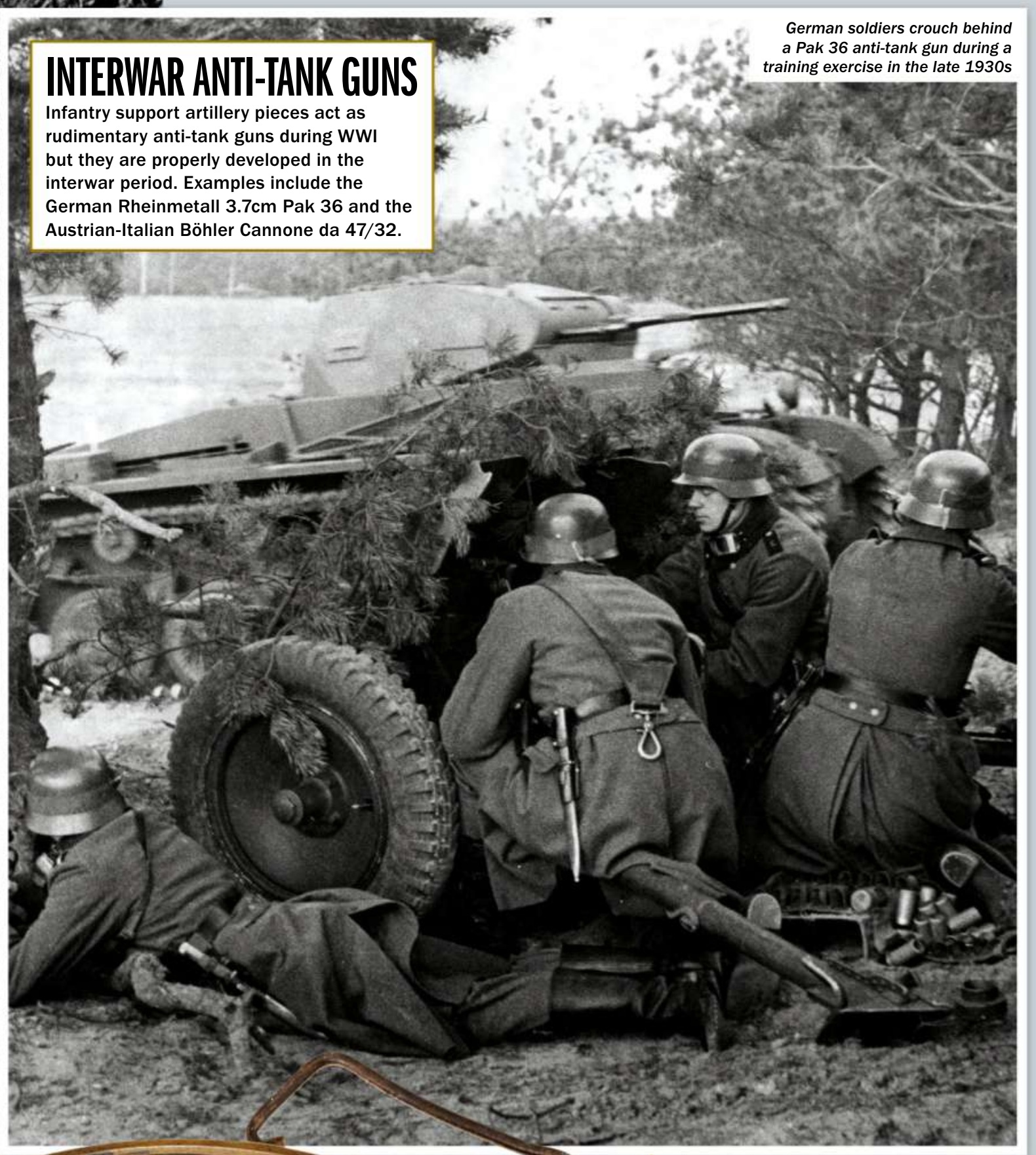
MAGINOT LINE 03

Constructed on the French side of France's northern and eastern borders, the Maginot Line is a line of concrete fortifications and weapon installations. Its substantial anti-tank defences include obstacles, mines, infantry, guns and bunkers.

A section of anti-tank obstacles on the Maginot Line

INTERWAR ANTI-TANK GUNS

Infantry support artillery pieces act as rudimentary anti-tank guns during WWI but they are properly developed in the interwar period. Examples include the German Rheinmetall 3.7cm Pak 36 and the Austrian-Italian Böhler Cannone da 47/32.



German soldiers crouch behind a Pak 36 anti-tank gun during a training exercise in the late 1930s

"LAND WARFARE CHANGES FOREVER WHEN THE BRITISH ARMY DEPLOYS THE MK I TANK TO FIGHT AT THE BATTLE OF THE SOMME"

1920s-1930s

1929-35

1939-45

TELLERMINES 04

Developed in Germany, Tellermines are round, metal-cased anti-tank blast landmines. The first to be produced is the Tellermine 29, while the Tellermine 35 is used during the Spanish Civil War from 1935.

Millions of the Tellermine 43 variants are produced by Germany during WWII

WWII AIRCRAFT

During WWII Allied and Axis powers develop aircraft that can engage tanks. The first is the dive-bombing German Junkers Ju 87 Stuka, while the British install 40mm cannons on Hawker Hurricanes and HE rockets on Hawker Typhoons.

RAF ground crew load a Hawker Typhoon with one of its two 500lb bombs

Images © Alamy, Getty

TANK DESTROYERS 05

EXPERIMENTAL MECHANISED FORCE 02

MAGINOT LINE 03

ANTI-TANK MISSILES 08

RAM ROCKET 06

ENTER THE TANK 01

TELLERMINES 04

PRESENT DAY 09

Below: *A Welsh Guardsman takes aim. Pictured at Pirbright Barracks, Surrey, prior to deployment to the Falklands*

Right: *A US soldier demonstrates an anti-tank weapon at Fort Bragg, 5 April, 1975*

TANK DESTROYERS 05

Tank destroyers are vehicles armed with a direct-fire artillery gun or missile launcher. They are specifically designed to engage and destroy tanks, with the first being developed during WWII.

The first tank destroyers are German Panzerjäger (Tank Hunters) that see combat service from 1940

HEAT

High-Explosive Anti-Tank, (HEAT) weapons are light, man-portable devices that fire shaped explosive charges against tanks. During World War II, HEAT weapons range from small recoilless guns to rocket launchers and portable mortars.

Dutch soldiers train with a PIAT, a British man-portable anti-tank weapon, in 1943. The PIAT's design is based on a spigot mortar system

***Above:** This Soviet propaganda photo shows a daring tactic for taking on a tank*

PRESENT DAY 09

Since the Israeli-Lebanon War of 2006, anti-tank warfare focusses on portable rocket-propelled grenades and HEAT missiles fired from ground vehicles or helicopters. Weaponry is larger to break through stronger tank armour.

Soldiers of 1st Estonian Infantry Brigade Anti-Tank Company fire a MILAN missile during a NATO anti-tank training exercise in northeast Estonia, 15 March 2016

ANTI-TANK MISSILES 08

Anti-tank missiles are originally wire-guided with the first operational example being the French Nord Aviation SS.10. It is developed slightly before the Anglo-Australian Malkara, which is one of the earliest guided anti-tank missiles.

The Malkara missile is successfully tested by the Royal Armoured Corps at Lulworth, Dorset, on 6 June 1960

***Below:** US Navy Douglas A-1 Skyraiders and Vought F4U Corsairs fly a combat mission over Korea armed with RAM rockets in 1952*

RAM ROCKET 06

The Americans design an air-to-ground anti-tank rocket for use by the US Navy during the Korean War. It is extremely successful against armoured targets in North Korea when fired from aircraft.

ATTACK HELICOPTERS 07

1939-45 — 1950-54 — 1950s'- — 1955- — 2006-

HEDGEHOGS AND DRAGONS

As well as mines, anti-tank obstacles such as the Czech Hedgehog and Dragon's Teeth are developed to impede the movement of tanks and mechanised infantry. Both the Allies and Axis powers extensively use them, including for the Atlantic Wall and Siegfried Line by the Germans.

Soldiers pose next to a Czech Hedgehog, c.1942

ATTACK HELICOPTERS 07

The French originally arm helicopters with wire-guided missiles but the first specific anti-tank helicopter is the American Bell AH-1 Cobra for use in the Vietnam War. Attack helicopters now use ATGW (Anti-Tank Guided Weapons) against armoured vehicles.

A Bell AH-1 Cobra pictured in the Vietnam War. The Cobra has many weapons on board, including anti-tank missiles on its stub-wing

Images © Alamy, Getty

WWI

TAKING ON THE FIRST TANKS

On the morning of 15 September 1916 the British Army altered the course of land warfare forever, deploying 49 Mark I tanks into the Battle of the Somme. This new technology quickly necessitated strong counter-measures

When they first encountered the tank in battle, German soldiers fled in panic. However, they quickly realised that these armoured behemoths, although fearsome, possessed weaknesses. Unwieldy, they often fell into shell holes or encountered obstacles that rendered them immobile. Furthermore, they were susceptible to existing weapons to varying degrees.

While machine gun and rifle bullets often glanced off their iron hulls, plunging artillery fire could destroy a tank with relative ease. The flamethrower was another nemesis, provided the infantryman could get close enough to spew the deadly stream inside the vehicle or set fire to a vital area such as its exhaust system. Along with these readily available defences, deep anti-tank ditches were dug to impede the progress of armour, and extensive minefields proved effective as well.

The German Army rapidly devised new weapons and tactics to defeat the tank in the field. Chief among these were three primary initiatives: the use of artillery with special emphasis on tank killing, the deployment of anti-tank rifles of calibre large enough to penetrate the tank's armour, and an innovative use of bundled hand grenades called the geballte ladung – bundled charge – that could be hurled toward the enemy tank and disable it with the weapon's detonation.

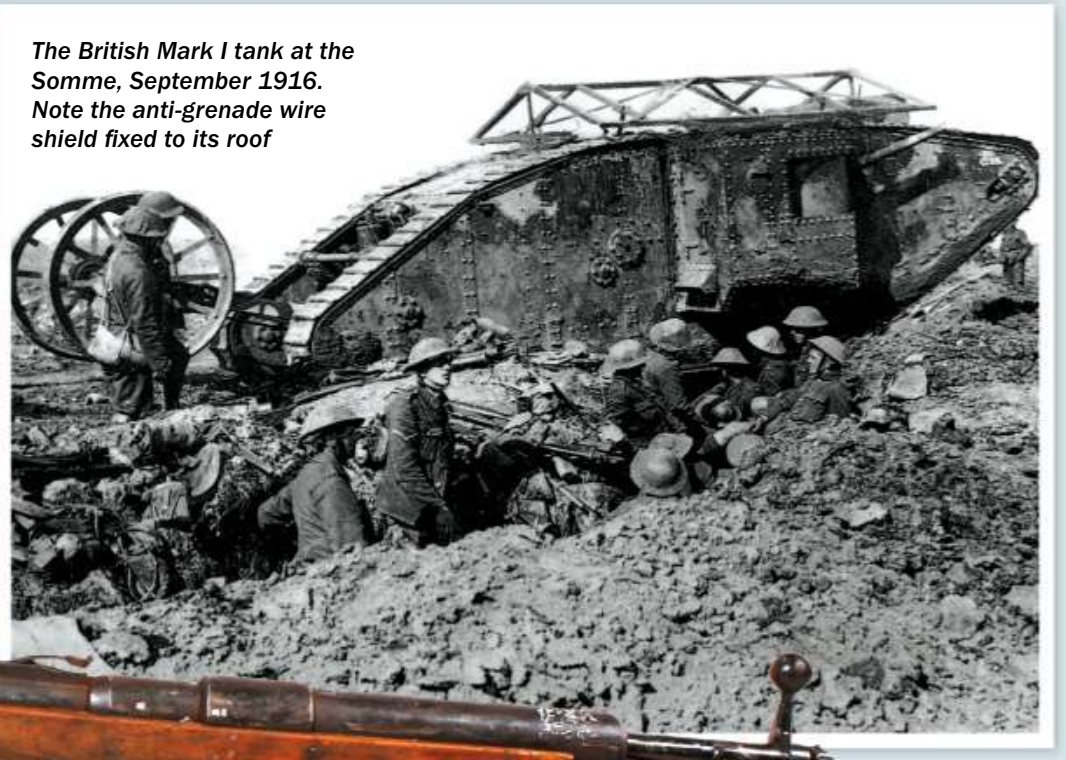
The German Army received nearly 17,000 13mm Mauser 1918 T-Gewehr anti-tank rifles during World War I. The first infantry weapon designed specifically for anti-tank use, the T-Gewehr was a bolt-action firearm that was manually loaded and fired a single shot. It was based on large-calibre rifles used to hunt big game such as elephants and was operated by a crew of two: a gunner and an ammunition bearer. The powerful rifle produced such a recoil that aiming and successfully hitting even a slow-moving target such as the tanks of the day was problematic. Theoretically effective at distances of up to 500 metres, the rifle was heavy, weighing 16kg, and cumbersome, with a length of more than 1.7 metres. It was intended to be fired from a fixed position, such as inside a bunker or within the confines of a trench.

The bundled charge, meanwhile, was a relatively simple innovation. Two or more 'potato masher' hand grenades were tied together and thrown toward the enemy tank. Although the weapon could not adhere to the target, it was expected that an accurate toss could land close enough to disable the vehicle. The bundled charge was most effective when thrown on top of the tank, where armour protection was thinnest. Still, the problem remained in the approach to the target. In order for a German soldier to advance within effective range to throw the anti-tank grenade, the infantry accompanying the British or French tanks had to be suppressed or eliminated. This was often difficult or impossible to achieve.

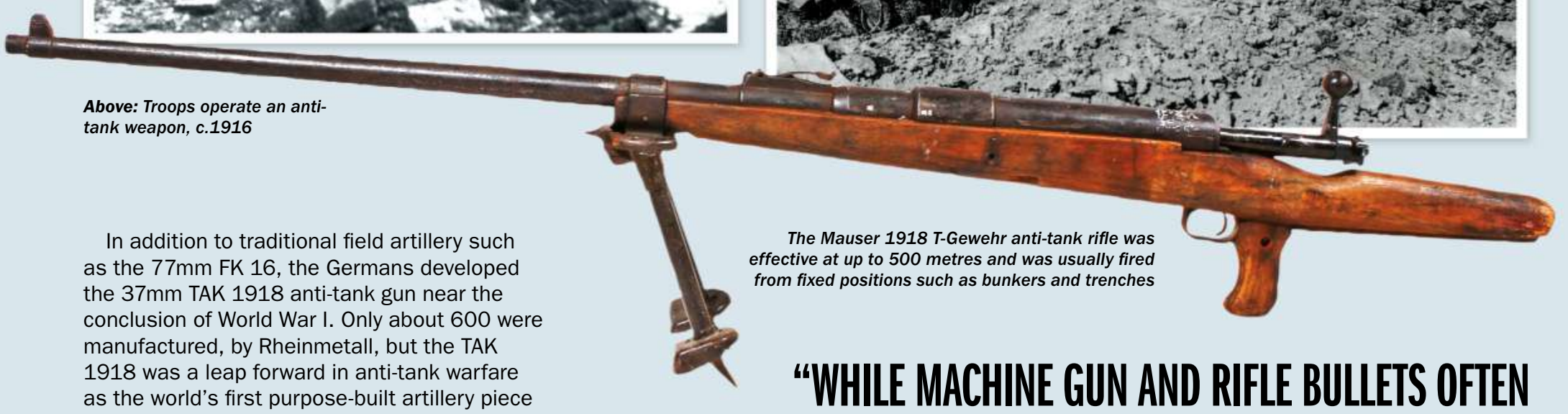
***Below:** A German soldier takes aim with a Mauser 1918 T-Gewehr rifle – the first infantry weapon specifically designed for anti-tank use*

Images © Alamy, Getty

***Above:** Troops operate an anti-tank weapon, c.1916*



The British Mark I tank at the Somme, September 1916. Note the anti-grenade wire shield fixed to its roof



The Mauser 1918 T-Gewehr anti-tank rifle was effective at up to 500 metres and was usually fired from fixed positions such as bunkers and trenches

In addition to traditional field artillery such as the 77mm FK 16, the Germans developed the 37mm TAK 1918 anti-tank gun near the conclusion of World War I. Only about 600 were manufactured, by Rheinmetall, but the TAK 1918 was a leap forward in anti-tank warfare as the world's first purpose-built artillery piece specifically designed for the task. The TAK 1918 was mounted on a wheeled box carriage with a seat toward the rear for the gunner. It was serviced by a crew of seven and fired an armour-piercing round weighing 0.45kg that effectively penetrated 1.5cm of armour at a range of 500 metres.

When the TAK 1918 was deployed in the field, the concept of interlocking fields of fire was implemented. Two guns were to work as a team, their positions providing mutual support. The German Army placed an initial order for 300 guns and then increased that to 1,020, but production ceased with the armistice before the full complement could be manufactured and delivered to the front line.

"WHILE MACHINE GUN AND RIFLE BULLETS OFTEN GLANCED OFF THEIR IRON HULLS, PLUNGING ARTILLERY FIRE COULD DESTROY A TANK WITH RELATIVE EASE"

During the years between the world wars, the development of the tank continued and the evolution of anti-tank weapons followed suit. Fixed fortifications such as the Maginot and Siegfried Lines were constructed with anti-tank tactics in mind. In addition to minefields and obstacles such as tank traps or trenches, angular concrete obstructions nicknamed Dragon's Teeth were planted along avenues of approach to strongpoints. Artillery pieces of varying calibres, particularly 37mm and 47mm, were also placed into gun turrets and fired armour-piercing rounds.

Improvements were made in anti-tank ammunition, progressing from basic armour-piercing ammunition that used sheer energy to penetrate to shaped charges that created a flow of liquid metal that burned through armour to inflict catastrophic damage. Shaped charges did not require the high velocity of standard armour-piercing rounds to achieve penetration.

WWII

PANZERFAUSTS & PIATs

As highly manoeuvrable armoured units gained huge success on the battlefields of Europe and beyond, increasingly accurate and powerful weapons were put into the hands of infantrymen

Above: A member of the Home Guard demonstrates the EY rifle with No.68 anti-tank grenade

After the outbreak of the Second World War, anti-tank weaponry expanded. A focus remained on the anti-tank rifle, and one of the best-known such weapons was the Boys, which was fielded in three main variants from 1937. Nicknamed the Elephant Gun because of its large 14mm bore, it was bolt-action and capable of firing up to ten rounds per minute from a five-round magazine. Its heavy recoil meant that it had to be mounted in a fixed position or on a bipod, and it was effective up to 460 metres.

Although the anti-tank rifle rapidly became obsolete as World War II progressed, a number of these weapons were produced and served throughout the conflict. Among them were the Soviet Red Army's PTRD-41 and PTRS-41, which were infantry portable at 17kg and fired 14.5mm rounds. More than 1.5 million of the types were produced. The Japanese chose a much heavier configuration, the Type 97 anti-tank rifle that weighed a backbreaking 60kg and fired a 20mm round from a seven-round clip. The Type 97's tremendous recoil made the weapon highly inaccurate.

***Left:** A member of the Hitler Youth is instructed in operating a Panzerfaust, c 1945.*

Canadian troops train with a PIAT anti-tank weapon, 1943

German troops fired the Panzerbüchse 39, utilising a relatively small 7.92mm cartridge whose performance was enhanced with a tungsten core for greater penetration capability. The Granatebüchse 39 propelled three types of grenades against enemy armoured vehicles and infantry concentrations.

By 1943, the Boys was largely supplanted by the PIAT (Projector, Infantry, Anti-Tank) in response to the British Army's need for a man-portable weapon that was effective against German tanks with increasing armour protection. The PIAT was a spigot mortar that projected a 1kg shaped charge up to 320 metres. It debuted on the battlefield in North Africa in 1943 and weighed 14.5kg. Its relatively lightweight design meant it could be operated by a single soldier, although it was often serviced by a two-man team.

Other well-known infantry anti-tank weapons of World War II were the American M1 Bazooka, a shoulder-fired weapon utilising a 60mm high-explosive rocket that was one of the world's first HEAT (High Explosive Anti-Tank) rounds. German engineers modelled their RPzB Panzerschrek, firing an 88mm high-explosive rocket, on a captured American Bazooka. More than 300,000 Panzerschreks were manufactured during the conflict. The most numerous German anti-tank weapon was the famous Panzerfaust, man-portable with a throwaway tube that launched a shaped charge weighing a mere 3kg. More than six million were manufactured after 1943, and little training was needed to operate it successfully.

Anti-tank guns were commonly deployed with infantry and armoured formations in World War II. Early models developed prior to the outbreak of hostilities included the British QF 2-pounder, a 40mm gun which was the primary such weapon deployed to France in 1939. The QF 2-pounder was effective against early German tanks, firing a kinetic energy round up to an effective range of 1,370 metres. However, increasing armour thickness in a new generation of German armoured vehicles rendered the QF 2-pounder obsolete and it gave way to the QF 6-pounder, a 57mm gun, by 1942. As the war progressed, the 17-pounder and even the 25-pounder were employed in the anti-tank role, although the heavier gun was primarily intended for artillery bombardment.

German anti-tank guns included the 28mm Panzerbüchse 28, the 37mm Pak 36 and the heavier 75mm Pak 40, each of these firing a round of progressively heavier calibre and penetration capability.

However, the iconic anti-tank weapon of World War II was the German 88mm Pak 43/41, an anti-tank derivative of the 88mm flak gun. Although intended as an anti-aircraft weapon, the 88 was pressed into service against British tanks at the Battle of Arras in 1940 and proved deadly in the anti-tank role, its barrel depressed to the horizontal to fire directly into enemy armour. The 88 further accounted for many Allied tanks in North Africa and Italy and on both the Eastern and Western Fronts. The classic 88 had an effective range of around 1.5km and was capable of firing up to 20 rounds per minute. More than 21,000 were produced before and during World War II.

***Below:** A PIAT gunner of the 1st Norfolk Regiment during the advance on Wanssum, Holland, November 1944*

Soviet anti-tank guns were fielded in a variety of calibres from 47mm to 100mm, while the American light 37mm Gun M3 was effective against lightly armoured Japanese tanks in the Pacific theatre and later gave way to the 57mm M1 design based on the British QF 6-pounder of which more than 15,000 were produced.

Aerial interdiction of armoured vehicles came into its own during World War II. The German Junkers Ju-87 Stuka dive bomber was versatile in its role as a tactical attack aircraft, utilising bombs to destroy tanks; a tank-busting variant, the Ju-87G, was developed during the war, mounting 37mm cannon under each wing.

The Soviet Red Air Force deployed hundreds of Ilyushin Il-2 Shturmovik ground-attack aircraft. The Il-2 was dubbed the Flying Tank and mounted 23mm cannon along with a variety of rockets and bombs. More than 36,000 were produced during the course of World War II. The US Army Air Forces deployed fighter-bomber versions of the North American P-51 Mustang and the Republic P-47 Thunderbolt. Each of these mounted heavy .50-calibre machine guns that were capable of penetrating light armour, while a complement of bombs or rockets was effective against German and Italian tanks. The Royal Air Force deployed such aircraft as the Hawker Typhoon, capable of delivering rockets and bombs against armoured targets.

Images © Alamy, Getty

COLD WAR

ROCKET-POWERED PRECISION

Since the end of World War II tanks and the weapons designed to destroy them have been locked in a deadly race for dominance on the battlefield

The latter half of the 20th century saw improvements in armour protection and firepower for tanks and the upgrading of anti-tank weapons' accuracy and effectiveness. In the immediate aftermath of World War II, holdover technology prevailed on the battlefield, although there were innovations such as the American Super Bazooka with its 89mm HEAT round.

The Cold War gave rise to a new generation of aircraft that served as ground-support weapons in their primary roles, and ground support most definitely included the ability to defeat enemy tanks. The American A-10 Thunderbolt entered service in 1977 and remains active today, famous for its survivability demonstrated during Operation Desert Storm in 1991 and for its 30mm GAU-8/A Avenger auto-cannon that fires a depleted uranium armour-piercing round.

In 1981 the Soviet Union deployed the Sukhoi SU-25 Frogfoot as a ground-attack aircraft with a 30mm Gryazev-Shipunov GSjh-30-2 auto-cannon, rocket pods and an array of missiles. (The aircraft has recently appeared in the skies over Ukraine). More than 1,000 were manufactured during a 40-year production run.

Helicopters have emerged as a primary platform for anti-tank weaponry, and among the most famous are the US Huey Cobra Gunship and Apache attack helicopters along with the Soviet-era Mil Mi-24 Hind, which functions as an attack helicopter and light troop transport. More recently the introduction of unmanned drones such as the American MQ-1 Predator, which accurately delivers the AGM-114 Hellfire missile and other anti-tank and anti-personnel ordnance, has revolutionised modern combat. Drones are playing a significant role in the current war in Ukraine, and stunning footage of their combat effectiveness has been shown around the world.

Such advancements have been developed to counter improvements in armour protection and tank survivability. For example, the British military establishment introduced Chobham armour in the 1960s. A composite that includes ceramic tiles encased in a metal framework, Chobham was proven effective as a deterrent to anti-tank fire and the exact composition of the material remains classified. Additionally, Explosive Reactive Armour (ERA) was developed concurrently both East and West, applying the principle of the counter-explosion to negate the penetrating impact of HEAT and kinetic anti-tank rounds.

Amid the proliferation of both armour protection and weapons designed to comprehensively defeat tanks on the modern

***Above:** A US Marine trains with an M47 Dragon anti-tank guided missile. The system was in service between 1975-2001*

***Right:** A cadet at the Suvorov Military School, Leningrad, is pictured with an RPG-7, January 1989*

***Below:** The Russian RPG-7 is one of the best-known anti-tank weapons, capable of firing an 85mm rocket nearly 1km*

"MORE THAN NINE MILLION RPG-7S HAVE BEEN MANUFACTURED SINCE 1958, AND THE WEAPON REMAINS IN PRODUCTION"

battlefield, the shoulder-fired or infantry level anti-tank weapon has maintained its significance. Among the best-known infantry anti-tank weapons of the late 20th century are guided varieties that came to prominence in the 1960s. The first man-portable of the type was the Soviet AT-3 Sagger, a short-range HEAT missile capable of penetrating 400mm of armour.

Contemporary with the emergence of the Sagger was the deployment of the American BGM-71 TOW, which entered service in 1970. The wire-guided TOW, which remains in service, is man-portable or mounted on vehicles or helicopters. The US Army also introduced the collapsible M72 LAW rocket launcher during the Vietnam era, and by the mid-1980s it had been supplanted by the shoulder-fired disposable Swedish-designed AT4 (M136).

The American FGM-148 Javelin entered service in 1996 as a replacement for the wire-guided M47 Dragon. It fires an 8.6kg HEAT warhead with an effective range of up to 5km. It is illustrative of the concept of 'fire and forget', which utilises sophisticated technology to remain on target as the operator displaces to avoid a retaliatory strike.

Among the iconic anti-tank weapons of the Cold War is the family of Soviet-developed RPGs (rocket-propelled grenade). The RPG series finds its roots in the German Panzerfaust, and it has remained a deadly adversary on battlefields the world over for generations. The RPG-7 is the best-known anti-tank variant. Shoulder-fired, portable and reusable, it fires an 85mm rocket nearly 1km. More than nine million have been manufactured since 1958, and the weapon remains in production.

Modern infantry anti-tank emphasis remains on the ability of the weapon to penetrate new generations of armour protection and enable the operator to relocate swiftly.

Some modern military observers believe that the age of the tank may be coming to an end due to the impressive advancement of anti-tank weaponry, others reason that the life-and-death rivalry between armour and weapons intended to destroy it will continue well into the future.

A female Vietcong soldier in action with an anti-tank gun during fighting in southern Cuu Long Delta, South Vietnam in spring 1968

Images © Alamy, Getty

MODERN ANTI-TANK WEAPONS

Rapidly advancing technology has fuelled new generations of infantry and aerial anti-tank weapons

Anti-tank weaponry of the post-Cold War era, leaning heavily on the wave of military technology that began to emerge in the latter half of the 20th century, has led to the introduction of potent, man-portable missile and rocket systems as well as accurate, deadly systems fired from ground installations and aerial platforms such as helicopters, fixed-wing aircraft and unmanned drones.

Infantry systems often employ the concept of 'fire and forget', enabling a ground operator to aim, fire and then displace to avoid a counter-strike from the enemy; missiles fired from aircraft are often placed on target by sophisticated laser guidance systems. Although such technology has transformed the battlefield, resulting in a continuing advancement in both anti-tank weaponry and the defensive capabilities for the tank to protect itself, some systems have remained viable for many years, bridging the Cold War period well into the 21st century. The viability of armoured fighting vehicles and the effectiveness of weapons designed to kill the tank in combat have both been tested since the end of the Cold War, during Operation Desert Storm, the wars in Iraq and Afghanistan, and numerous other conflicts.

While the survivability of the armoured fighting vehicle on the battlefield has been improved with the introduction of countermeasures, explosive reactive armour (ERA), Chobham and other defensive initiatives, the anti-tank

"ANTI-TANK WEAPONS AVAILABLE TODAY ARE INCREASINGLY POTENT IN FIREPOWER AND ACCURACY"

A US soldier fires a Javelin missile. The Javelin has gained attention during the war in Ukraine

weapons available today are increasingly potent in firepower and accuracy. During the current war in Ukraine, one of the most prominent weapons systems is the American-made FGM-148 Javelin, a fire-and-forget man portable system introduced in the mid-1990s as a replacement for the M47 Dragon.

Ukrainian infantrymen have utilised the Javelin successfully against the most recent Soviet-era and Russian tanks, contributing to losses that have risen to the point that the Russian military has committed reserve armour, some of its deployed tanks being 40 or more years old. The Javelin fires an 8.4kg HEAT (high explosive anti-tank) round accurately up to 2,500 meters. It weighs 22.3kg, and the weapon is discarded after firing. The Javelin is fired from the shoulder by a crew of two or mounted aboard infantry or fighting vehicles.

Other man-portable anti-tank missiles in use in Ukraine include the Skif, developed in Ukraine and Belarus and in service since 2011; the MILAN, a French-German collaboration that was developed in the 1970s and has been continually upgraded; the German Panzerfaust 3; and the NLAW (Next Generation Light Anti-tank Weapon), the result of a cooperative effort between Swedish and British defence authorities. The Skif is fired from the shoulder or a vehicle mount, projecting 130mm or 152mm rounds up to five kilometres, while the MILAN and its improved variants are in service today with up to 50 countries. Weighing approximately 24kg, the MILAN fires a 2.7kg warhead up to two kilometres.

The Panzerfaust 3 traces its origin to World War II, when the German Army deployed several effective infantry level weapons against Allied tanks. The latest edition has seen action in Ukraine, firing a dual hollow-charge tandem warhead intended to cause ERA to detonate prematurely, allowing the primary charge to penetrate thick underlying steel. The Panzerfaust 3 weighs up to 15.6kg with a range up to 20 metres.

Other man-portable anti-tank systems include the single-use AT-4 from Sweden – lightweight at 6.7kg and firing an 84mm unguided HEAT round up to 500 metres – and the venerable US M72 LAW (light anti-tank weapon) that fires a 66mm rocket and has been upgraded regularly since its introduction in the 1960s.

Among the best known anti-tank missiles, two American systems, the AGM-114 Hellfire and AGM-65 Maverick, have earned their stripes on the battlefields of the post-Cold War era. The Hellfire is an air-to-ground laser guided missile that has proven proficient in the anti-tank role, and it can be fired from naval or ground platforms. It is most notable for pairings with the AH-64 Apache and AH-1W Super Cobra attack helicopters and the MQ-1 Predator and Reaper drones during the wars in Iraq and Afghanistan and the War on Terror. Hellfire is 1.6 metres long and carries a variety of HEAT, shaped charge, tandem anti-armour and fragmentation rounds.

Introduced in the 1970s, the AGM-65 Maverick survived the Cold War as a powerful air-to-ground missile to become the most widely produced weapon of its kind in Western arsenals. Maverick is more than 2.4 metres long, weighs up to 304kg and is capable of mounting a variety of mission-specific warheads.

Primary modern anti-tank weapons systems developed in Russia include the man-portable and aerial mounted 9M133 Kornet and the recently debuted Vihr-1. The Kornet entered service in 1998 and has proven effective during conflicts in the Middle East and the current war in Ukraine. Firing a 4.6kg tandem HEAT warhead effectively to 10,000 metres depending on the type of missile, Kornet has also been utilised by Palestinian militias against Israel. It can be fired from tripod or vehicle mounts. The Vihr-1 operates on the dual-explosive principle, detonating an initial charge that activates ERA, allowing the main charge to penetrate the steel skins of opposing armoured vehicles.

Other anti-tank systems in use around the world today include the well-known US M71 TOW (tube-launched, optically tracked, wire guided) missile, the Israeli LAHAT (laser homing attack missile), Israeli-German Spike, Chinese HJ-12 Red Arrow, helicopter-mounted Turkish UMTAS, German PARS 3 LR, and the French MMP slated to eventually replace the MILAN. The Soviet/Russian RPG series is a mainstay the world over, particularly the old but reliable RPG-7, introduced in 1961 but cheap and plentiful even today.

Anti-tank guns, prominent during the latter half of the 20th century, have made something of a comeback recently. Those currently in use include the Russian 25mm smoothbore Sprut, active since 1989, and the 100mm T-12 a Soviet design from the 1960s that Ukrainian forces currently field in the war with Russia.

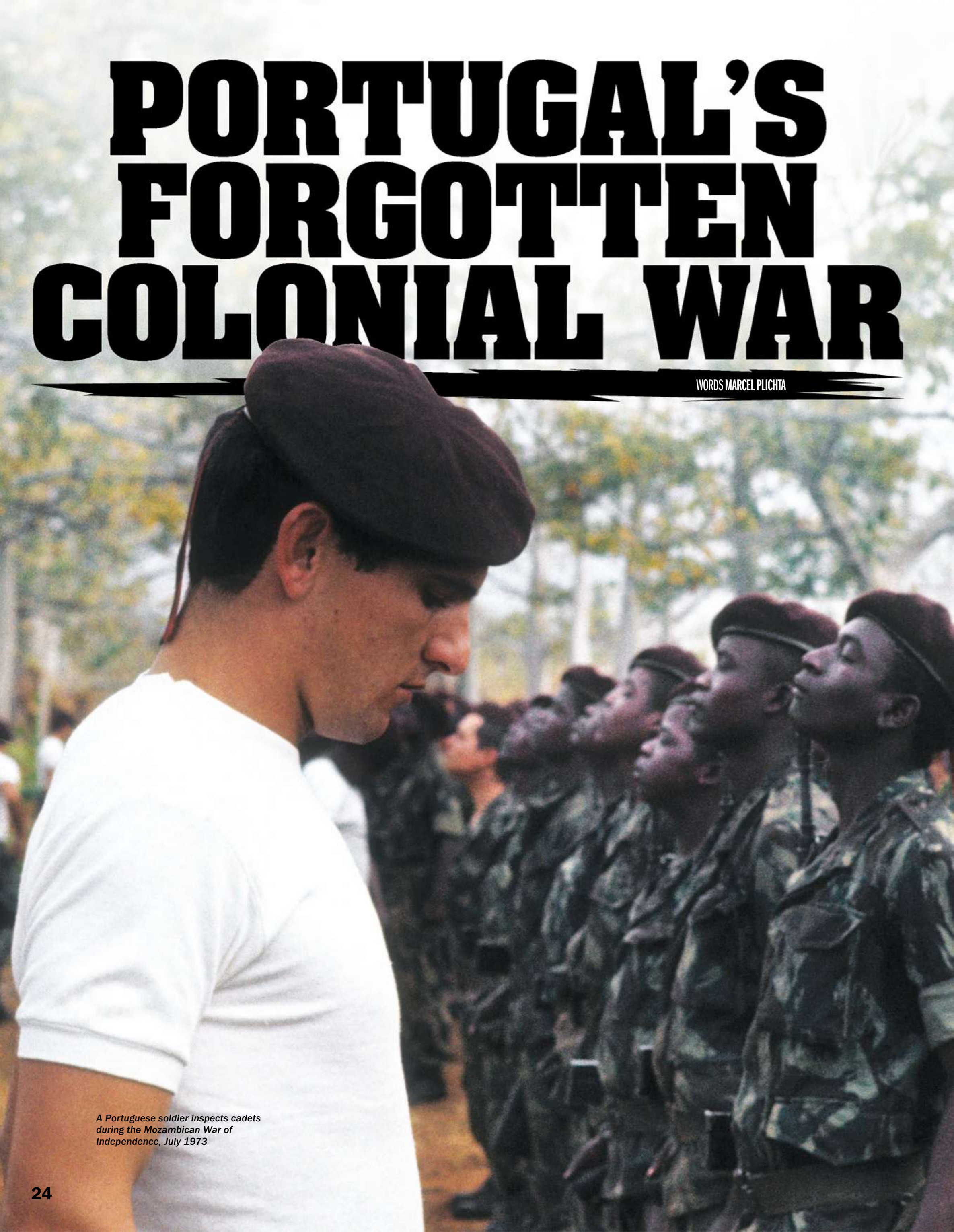
Images © Alamy, Getty

***Below:** A Ukrainian soldier demonstrates firing the MBT-NLAW (Next-generation Light Anti-tank Weapon) provided by the United Kingdom*

An AH-64A Apache anti-tank helicopter armed with AGM-114A Hellfire anti-tank missiles

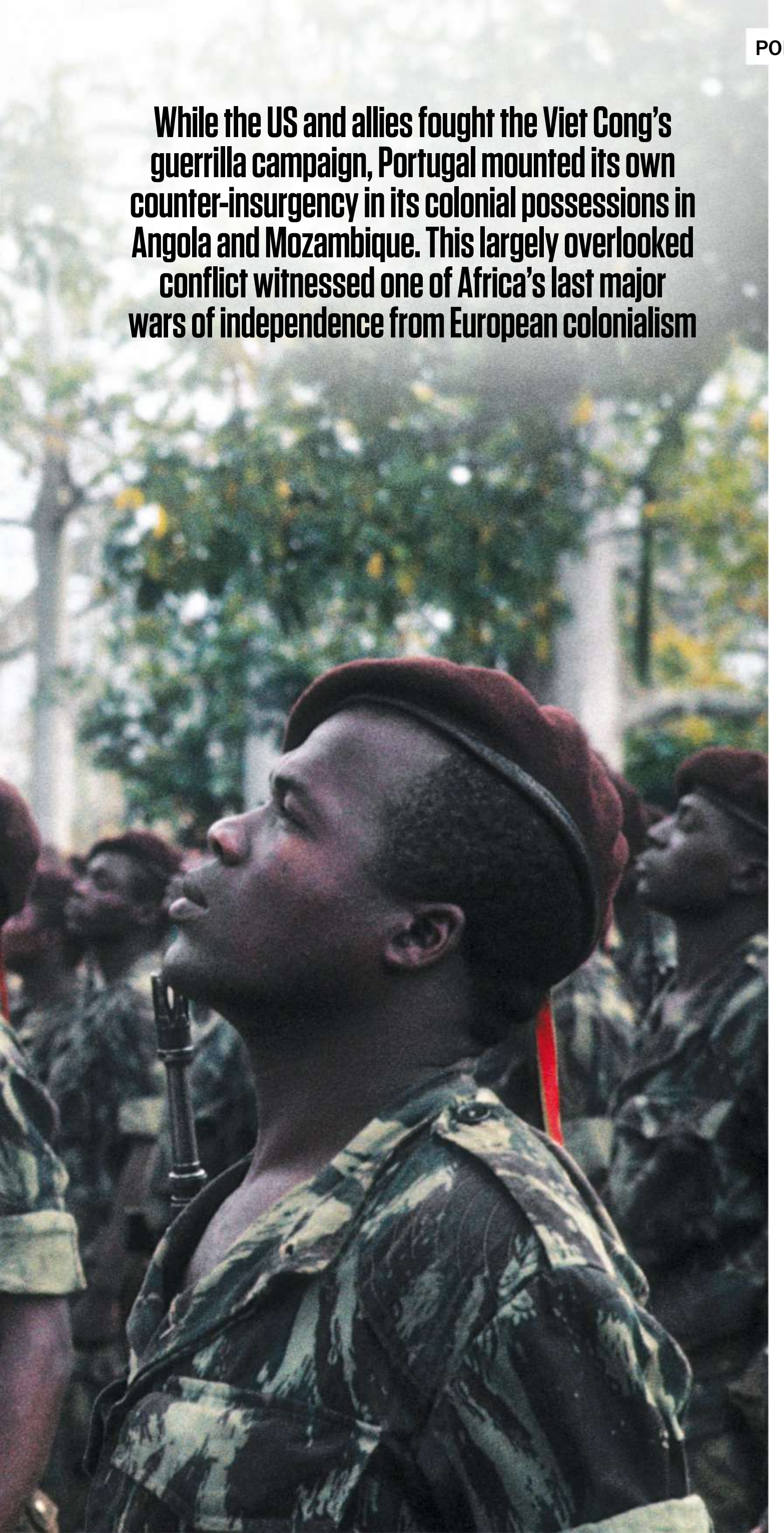
PORTUGAL'S FORGOTTEN COLONIAL WAR

WORDS **MARCEL PLICHTA**



A Portuguese soldier inspects cadets during the Mozambican War of Independence, July 1973

While the US and allies fought the Viet Cong's guerrilla campaign, Portugal mounted its own counter-insurgency in its colonial possessions in Angola and Mozambique. This largely overlooked conflict witnessed one of Africa's last major wars of independence from European colonialism



Portugal's 1960-74 colonial conflicts in Africa are some of the era's lesser-known counterinsurgencies, but there is a lot to learn from them. Despite being a small country with a modest economy and tiny military, Portugal fought three wars in Angola, Mozambique and Portuguese Guinea (now Guinea-Bissau and Cabo Verde) for over a decade. Compared to similar conflicts in Vietnam and Algeria, Portugal's innovative strategies and the fact that a revolution in Portugal ended the war rather than outright defeat on the battlefield, has led to a degree of myth-making about Portugal's military prowess. Were they as successful on the battlefield as they claimed? And why was Portugal so eager to hold on to its colonies well after the colonial era had come to a close?

Imperial legacy

Portugal's regime wanted to use the explosive economic growth of its colonies to spearhead growth at home. Despite a large colonial empire and history of global commerce, by the mid-20th century Lisbon did not have the population, industrial base or economic might enjoyed by the US, UK or France. Antonio Salazar, who ruled Portugal from 1933 until 1968, hoped to extract the wealth of the colonies to underpin his legitimacy. By the mid-1960s the combined GDP of these colonies was on track to equalling that of Portugal itself, which provided an enormous opportunity to increase Lisbon's prosperity at the expense of its African subjects.

The desire to develop Portugal with the wealth of its colonies led the nation to use every excuse possible to maintain its possessions while the rest of the world was undergoing decolonisation. Most notably, while countries like France distinguished between the colonies and the 'metropole', Portugal's Salazar regime sought to portray the metropole and the Ultramar (the word for Portugal's overseas possessions) as a united nation.

Portugal had plenty of warning that their colonies were on the verge of armed rebellion. Like other European colonies of the era, Angola, Mozambique and Portuguese Guinea staged a series of protests and demonstrations aimed at peacefully bringing about independence. Salazar, a fierce anti-communist, considered the wave of nationalism and decolonisation in Africa to be a threat to continued Portuguese possession of its colonies. Lisbon violently suppressed protests and it became clear to pro-independence voices across the Ultramar that armed rebellion was the only way to end Portugal's colonial project.

The pro-independence civil society organisations of the 1950s gave way to the insurgent groups of the 1960s that would define the colonial war and the immediate post-independence period. In Angola the principal armed groups were the Union of the Peoples of Angola (UPA), later known as the National Liberation Front of Angola (FNLA), and the People's Movement for the Liberation of Angola (MPLA). In Mozambique the primary armed group was the Liberation Front of Mozambique (FRELIMO), although several smaller groups also existed. In Portuguese

Images © Getty

***Above:** Portuguese marines in Mozambique, February 1967. By 1974 the situation in Mozambique had deteriorated into a stalemate*

***Above:** During its Colonial Wars Portugal lost about five times as many troops as a proportion of its population than the US did in the Vietnam War*

Guinea the main armed group was the African Party for the Independence of Guinea and Cape Verde (PAIGC), led by revolutionary icon Amilcar Cabral. Across the three colonies many of these groups identified themselves as anti-colonial and Marxist, which secured them assistance from the communist bloc and sympathetic independent African nations.

The Portuguese way of war

Portuguese leadership began producing a counterinsurgency doctrine immediately prior to the Colonial Wars. In anticipation of nationalist insurgencies in their own colonies, Portuguese officers studied the French and British experiences in Algeria and Malaya and produced O Exército na Guerra Subversiva, a comprehensive counterinsurgency doctrine, in 1960.

Portugal's model of insurgency was expressly designed for its limited military capacity. Compared to the other powers of the era, such as the UK, US and France, Portugal had a tiny economy and weak industrial base. The nation of nine million fielded a much smaller army than its contemporaries and was tasked with conducting three counterinsurgencies thousands of kilometres from Portugal. Facing financial and manpower constraints, Portuguese strategy revolved around indoctrinating the general population to prevent the insurgency from spreading while keeping the conflicts inexpensive enough that the military could outlast the insurgents.

Indoctrinating the general population against the insurgents would involve economic and social projects such as expanding the number of schools and medical facilities and providing agricultural and sanitary assistance. The military often provided the manpower for such projects. The deep cynicism underlying these efforts was the logic that improving the average person's life would make them less willing to join an insurgency. To make infiltration harder for insurgents, resettlement camps would be constructed to distance the population from insurgent areas and centralise aid services.

For the military, cost-reduction was the primary concern. After the colonial wars started, innovative cost-saving measures were implemented such as airlifts to transport troops and introducing cavalry units to patrol rough terrain. The Portuguese also saved money through the extensive recruitment of Africans into the war effort. Half of all operational troops by the end of the conflicts were African, and they were recruited for a variety of vital auxiliary roles. While local soldiers were allegedly paid the same as their Portuguese counterparts after 1962, they did not need to be transported from Portugal and were often polyglots. Last, the Portuguese organised self-defence groups to defend villages from insurgents when the military was not nearby.

"PORTUGUESE STRATEGY REVOLVED AROUND INDOCTRINATING THE GENERAL POPULATION TO PREVENT THE INSURGENCY FROM SPREADING"

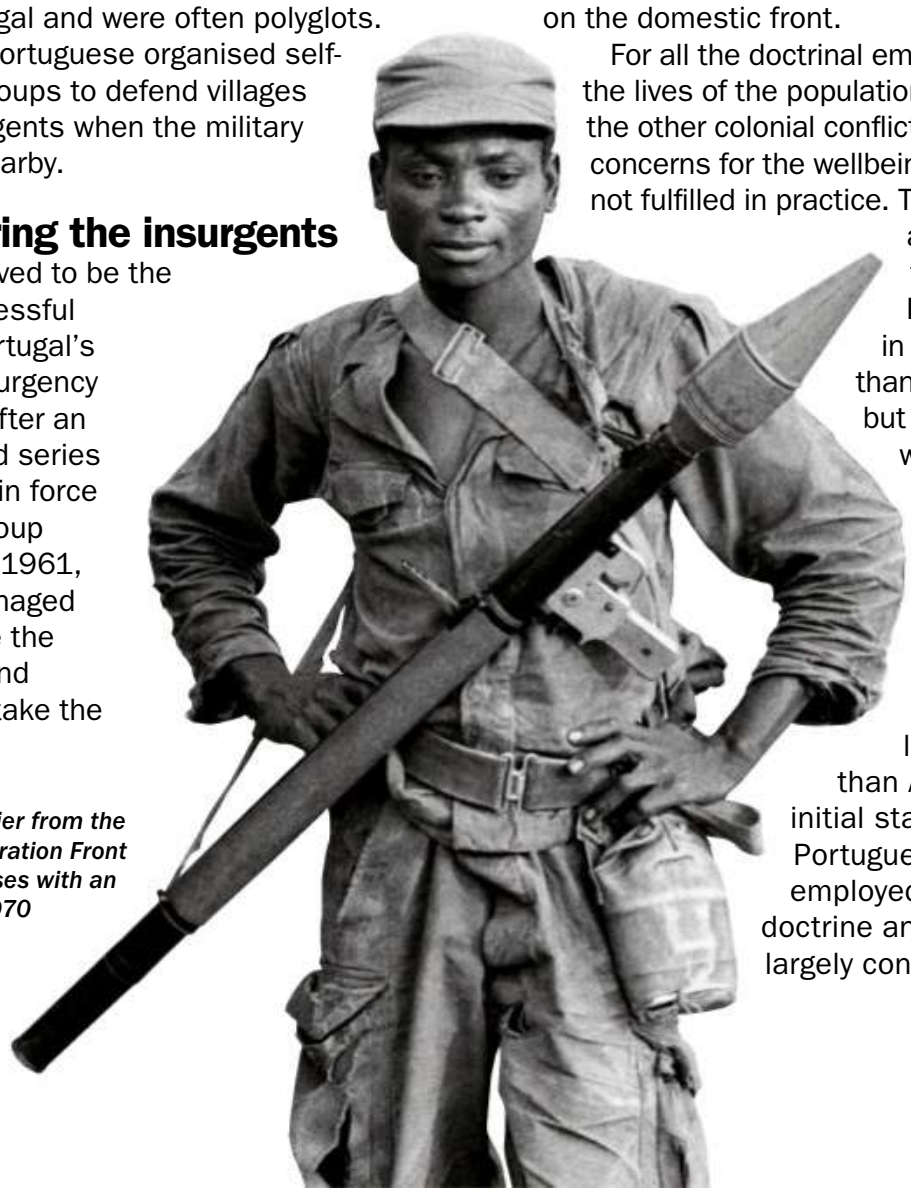
Countering the insurgents

Angola proved to be the most successful case of Portugal's counterinsurgency doctrine. After an unexpected series of attacks in force by rebel group the UPA in 1961, Lisbon managed to stabilise the situation and ultimately take the initiative against the insurgents by the late 1960s. Portuguese intelligence services successfully infiltrated insurgent groups, particularly the UPA, which gave them a strong advantage. In keeping with their strategy of launching social projects, Portugal quintupled the number of students in Angola and constructed homes for the approximately one million displaced persons in the country.

Success in Angola was at least partially due to the disjointed opposition and a favourable international position. The major insurgency groups operating in Angola by the late 1960s suffered from ideological divisions and did not cooperate with each other. The Portuguese also used economic leverage to force Zaire and Zambia, where insurgents usually hid, to stop overtly supporting nationalist movements. Portugal coordinated with South Africa, whose air force covertly patrolled the southern and eastern sections of Angola. With advantages in allies and disunited enemies, the military situation was steadily improving and studies of the conflict broadly agree that the tactical success was obscured by decisions made on the domestic front.

For all the doctrinal emphasis on improving the lives of the population, in Angola and the other colonial conflicts these supposed concerns for the wellbeing of civilians were not fulfilled in practice. Traditional narratives and histories of the conflict paint Portuguese actions in Africa as less brutal than the US or UK, but research reveals widespread abuses and violence against civilians, particularly women.

Portuguese efforts in Mozambique were less successful than Angola. In the initial stages of the conflict, Portuguese leadership employed the established doctrine and managed to largely contain the insurgents



***Right:** A soldier from the National Liberation Front of Angola poses with an RPG, June 1970*

Images © Getty

Groups such as the National Liberation Front of Angola were supported by Zaire and Zambia

PORTUGAL'S FORGOTTEN COLONIAL WAR

***Above:** A young Angolan soldier aims his weapon, October 1962. Angola proved to be the most successful case of Portugal's counterinsurgency doctrine*

People's Movement for the Liberation of Angola fighters pictured during operations against the Portuguese, 1968

***Above:** Armed rebellion against Portuguese colonial rule was stoked by a failure to improve the material conditions of its subjects*

to the northern sections of Mozambique. However, in 1970 newly arrived General Kaulza de Arriaga abandoned the doctrine altogether. Arriaga attempted to end the conflict through Operation Gordian Knot that would push FRELIMO rebels out of Mozambique using thousands of ground troops.

Arriaga's radical departure from established doctrine was unsuccessful and complicated the tactical situation. The assault displaced many civilians, and the insurgents were able to slip away by hiding among the refugees and re-established themselves in central Mozambique. Even the operation's proponents derided the large cost in political and financial capital. By 1974 the situation in Mozambique had deteriorated into a stalemate but was not an entirely lost cause for Lisbon. A CIA memo for US Secretary of State Henry Kissinger from 1973 indicates that FRELIMO was struggling to gain broad support from the population despite its measured growth. Some historians argue that the situation was deteriorating but could have been salvaged with new leadership.

Despite being the smallest and closest major colony, Portuguese Guinea proved to be Lisbon's most difficult theatre. Portuguese forces there received fewer resources due to the colony's lack of importance relative to the more prosperous Angola and Mozambique. The doctrine of keeping the population separate from the insurgents was nearly impossible to implement because the territory was small and more densely populated than the rural areas of Angola and Mozambique. Insurgents were able to contact the main population immediately after crossing the border. Meanwhile dense terrain was a formidable logistical challenge for the Portuguese and road construction was difficult due to flooding. Compared to Angola and Mozambique, Guinean insurgents were well-organised, lacked the internal divisions that the Portuguese exploited in other theatres, and had extensive support from the newly independent countries of Guinea (formerly French Guinea) and Senegal.

In all likelihood, Portugal would have soon lost control of Portuguese Guinea even if the 1974 coup had not occurred. An assessment of the conflict from RAND (a research and analysis organisation) found that it is "plausible that the insurgents were on their way to defeating the Portuguese militarily". The aforementioned 1973 CIA memo to Kissinger states that "some officials privately admit that Portuguese Guinea may soon be a lost cause". While the Portuguese doctrine was applied in the same manner as Angola and the initial stages of Mozambique, it proved incompatible when faced with a united opposition and hostile neighbours.

The cost of war

Portugal's endurance during its 1961-74 Colonial Wars is subject to a lot of mythology. In an era of military history defined by unsuccessful counterinsurgencies like the US in Vietnam, France in Algeria and the UK in South Yemen, Portugal quietly fought three simultaneous wars for over a decade with far fewer resources. Those same scholars hold that Portugal's defeat had less to do with Portugal's strategy, which was working, and more to do with the collapse of the Portuguese government.

The argument works in theory. After all, Portugal improved the counterinsurgency strategy that the UK and France used in their colonial conflicts and put it to use trying to maintain control of their empire. But in practice, Portugal's ill-fated attempt to prolong the colonial era lacked the political will, allies and resources to apply their doctrine with consistent success. Portugal might have had a coherent doctrine, but there's more to a conflict than doctrine. As lauded as Portugal's performance is by some historians, many other obstacles challenged Lisbon's ability to fight the wars exactly the way their doctrine demanded.

***Above:** Many Portuguese troops endured extensive combat tours lasting up to eight years*

Also left out of the discussion of Portuguese strategy is that trying to improve the lives of colonial subjects while exploiting their resources is contradictory. Portugal's violent suppression of peaceful pro-independence movements in the 1950s and refusal to invest in the wellbeing of the people of Angola, Guinea and Mozambique led to many of the grievances that produced armed rebellion in the first place. While Portuguese doctrine called for building schools, roads and hospitals, improving the material conditions of colonial subjects was only a priority after a lack of those services became an obstacle for Portugal's colonial project.

Ultimately, Portugal's doctrine saw some tactical success in Angola and in the initial stages of Mozambique but was ill-suited to Portuguese Guinea. While some may point to the military successes as victories undermined by the 1974 coup, they often fail to acknowledge the tremendous social pressure the war exerted on the Portuguese population and military. The initial coup was supported by disaffected officers, whose grievances included extensive combat tours lasting up to eight years. Enlisted soldiers also paid a high price: Portugal lost roughly five times as many soldiers as a proportion of its population than the US did in the Vietnam War.

For all the amazement from military historians that a small country like Portugal could sustain a war effort for so long, good doctrine in theory cannot overcome strategic and political problems in practice. Portugal's assumption that Pan-Africanism and decolonisation could be staved off at gunpoint proved to be false, regardless of how theoretically coherent or cost-efficient their doctrine was. In the end, the Colonial Wars led to immense costs in human life and set the stage for further conflict in Portugal's former colonies.

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HOPE AND HOMES FOR CHILDREN

URGENT APPEAL

Russia's brutal invasion of Ukraine is not just a humanitarian crisis for the Ukrainian people; it's a child protection emergency.

Up to 100,000 children warehoused in Ukraine's vast orphanage system – a network of over 700 buildings – risk being forgotten. Left to face the dangers of war alone as staff flee. As families are torn apart or forced from their homes, many more children are at risk of being separated from the love and protection they desperately need. Worse still, they are at risk of trafficking, or being placed in overcrowded, understaffed and poorly resourced orphanages in border countries.

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Born out of the Balkans conflict 30 years ago, we've championed the vital importance of family and community-based care of children and our teams are on the ground in Ukraine, Moldova and Romania to ensure this war does not rob children of the love and protection they need now more than ever. Across all three countries, we're directly supporting displaced families and unaccompanied children with material and emotional support. We're working closely with authorities to keep families together when they are at their most vulnerable and to fight for the safe tracking, monitoring and care for children without parental care. And we won't stop when the fighting stops.

Will you help us by donating?

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WORDS **ALEX BOWERS**

ASSALLY

TRUE STORY OF AN ALL-AMERICAN TRAITOR

A troubled child, failed Broadway actress, impressionable lover and Nazi propagandist, Mildred Gillars' life is an American tale that descends into the darkest depths of betrayal

Images © Getty

Mildred Gillars is a name synonymous with treason in the United States. During the Second World War the American became a broadcaster in Nazi Germany, tasked with devastating the morale of US troops. Yet despite her minimal impact on America's fighting spirit, Gillars – dubbed Axis Sally by her listeners – today boasts a legacy comparable to defector Benedict Arnold, spies Julius and Ethel Rosenberg, and double-agent Robert Hanssen.

However, exactly how and why the failed actress descended from the Broadway stage and onto the fascist airwaves of the Third Reich, still largely remains a unexplained. "Even now, mystery and ambiguity shroud her troubled life. Many, many questions surrounding her choices remain unanswered and, frankly, probably unanswerable," Professor Michael Flamm, a scholar of modern American political history at Ohio Wesleyan University (where Gillars studied before the war), told *History of War*.

A troubled childhood

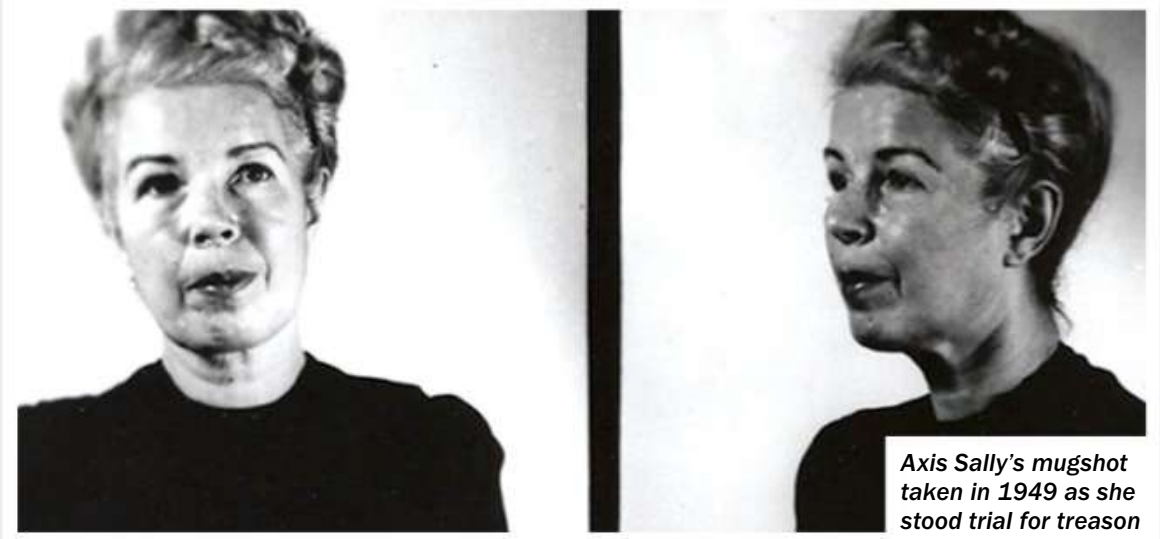
Born on 29 November, 1900, Mildred Elizabeth Sisk was the daughter of Canadian parents Mary (Mae), a seamstress, and Vincent, an alcoholic blacksmith. Her early years were spent across the border in Portland, Maine, where she bore witness to her father's drunken tirades and abusive behaviour. Eventually, her mother divorced Vincent and remarried dentist Robert Bruce Gillars, also an alcoholic, whose surname Mildred took. After the birth of her half-sister Edna in 1909, the family moved to settle in Ohio.

"She was drawn to the limelight in high school, where she developed an intense interest in theatre… at Ohio Wesleyan, she essentially majored in theatre," Professor Flamm says. It was there that she likewise discovered her interest in men. As Gillars' grades slipped and her mother's second marriage deteriorated, she turned her attention to Charles M Newcomb, a professor at Ohio Wesleyan who convinced her to abandon her studies and pursue a stage career. Dropping out of university a few credits short of her degree, she signed up for an acting school in Cleveland, accompanied by Newcomb.

The failed Broadway actress

Once she left acting schoo, and her relationship with Newcomb had run its course, Gillars remained intent on becoming a Broadway actress. From 1923, the penniless wannabe thespian tried desperately to obtain auditions, receiving the odd role or job over the next decade but failing to gain the renown she desired. A brief stint in Paris did little to kickstart her career. Disillusioned, she returned to New York City in 1929 as the Wall Street Crash decimated the creative arts industry.

"Mildred… had no family safety net to fall back upon," explains Professor Flamm. "She depended on herself. She found men who were willing to take care of her, but she also had to pursue a career because she had to pay the rent and put food on the table and buy clothes… She had no one… who was going to provide for her." This changed when Bernard Metz, a British Jew, caught Gillars' eye. In 1932, she departed from the United States to join Metz in Algiers, where he worked as a diplomat at the British Consulate.



Axis Sally's mugshot taken in 1949 as she stood trial for treason

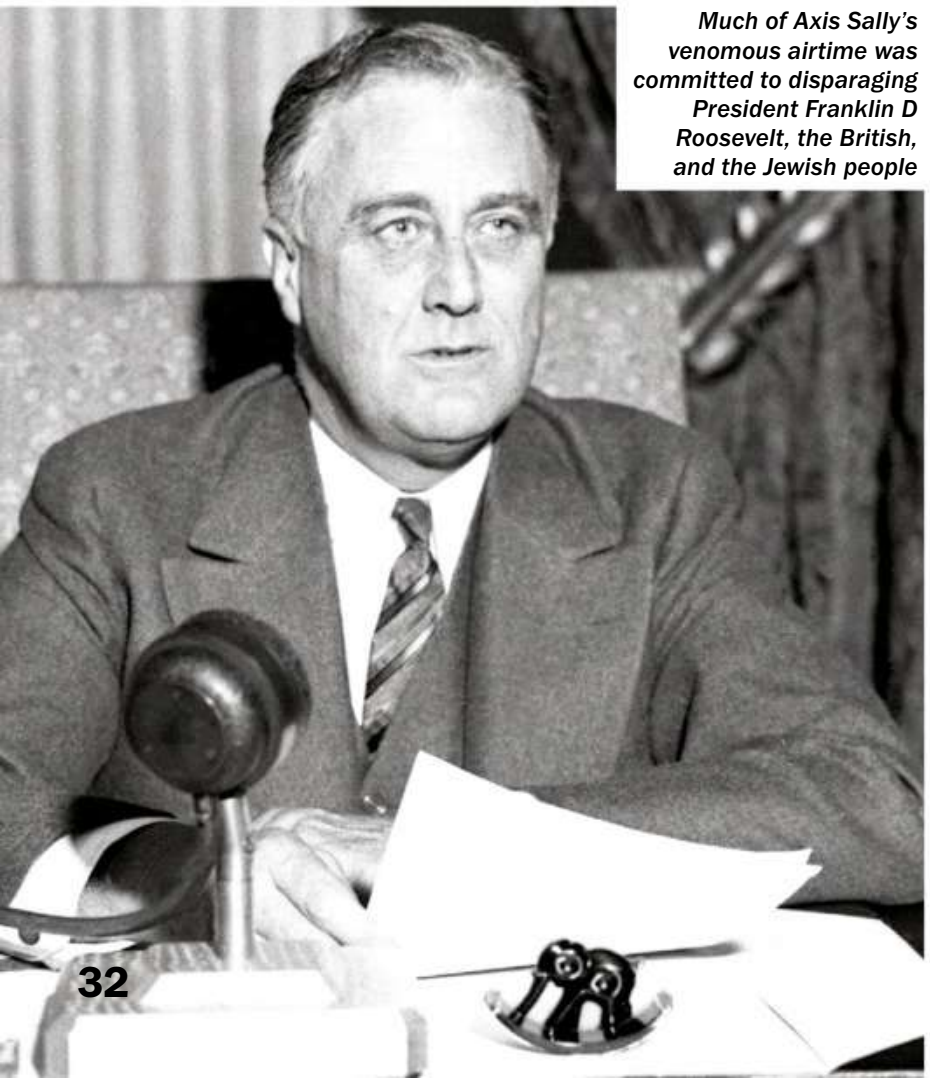
A dishevelled-looking Gillars disembarks the police van to the US District Court

***Opposite page:** Gillars, pictured at the start of her trial, became known as Axis Sally after describing herself on air as "the Irish type… a real Sally"*

***Left:** While Gillars denied knowledge of the Jewish plight in Nazi Germany, she was there to witness Kristallnacht – The Night of Broken Glass – in 1938*

Seen here leaving court after the first day of her trial, Gillars maintained her innocence throughout the proceedings and beyond

“NOW THE FIRST FEMALE HOST OF A MUSICAL VARIETY PROGRAMME ON THE EUROPEAN SERVICE, GILLARS WAS MAKING HER DREAM OF FAME A REALITY”



Much of Axis Sally’s venomous airtime was committed to disparaging President Franklin D Roosevelt, the British, and the Jewish people

A fresh start… in Nazi Germany

As with Newcomb, Gillars' relationship with Metz cooled. Her next fateful decision – to reunite with her mother in Europe – would see the pair visit Nazi Germany in 1934. Here Gillars would stay, and she became fluent in the language, studied piano, and landed several jobs through a well-placed local contact. Meanwhile, the 1936 Berlin Olympics left an impression on Gillars, although she later suggested that the games had been tainted by the "Jewish pestilence". Whether she harboured these anti-Semitic views beforehand is open to speculation.

In 1940, with the Second World War underway, another contact elevated Gillars to a position at Reichsradio, a broadcasting corporation that had already started bombarding the Allies with Nazi propaganda. Her initial role was limited to station identification, as well as introducing musical performances and records, yet her natural talent and charisma prompted a promotion within three months. Now the first female host of a musical variety programme on the European Service, Mildred was finally making her dream of fame a reality.

The impressionable lover

Max Otto Koischwitz, a German scholar, former US emigrant, married man, Reichsradio producer and fervent Nazi, would set Gillars on a trajectory from which she couldn't turn back – even if she'd wanted to. The ex-actress-turned-broadcaster, having reportedly lost a prospective husband on the Eastern Front without receiving a wedding proposal, saw in Koischwitz boundless opportunities. "On the one hand, [Koischwitz] is a master manipulator, someone who knew what strings to pull, what buttons to push, knew how to navigate Mildred towards greater and greater stardom to the point where she becomes the highest-paid performer on Reichsradio," says Professor Flamm. "He also fits the profile throughout her life: Mildred was attracted to older men who were frequently inaccessible or unavailable, at least in terms of being married and already having families."

Her dependence on Koischwitz reached new heights on 7 December 1941, when Japan attacked Pearl Harbor. Professor Flamm continues: "It's vital to remember that Mildred is effectively trapped in Germany after [the Japanese attack]… [Months earlier] in the fall of 1941, Mildred was summoned to the US embassy in Berlin and told to return to the United States… Mildred refused… she was finally enjoying a measure of celebrity and financial security… The US embassy takes away her passport, so she can't travel… Could she have gone back to the US embassy and pleaded her case? That's a possible scenario. But perhaps in her mind, she had burned her bridges with the United States."

The Nazi propagandist

To stave off enemy alien status, Gillars signed a loyalty oath to Nazi Germany. "At that point," says Professor Flamm, "her destiny was set." Entirely under the influence of Koischwitz, Gillars was steered towards propaganda. In 1942, as American GIs embarked on Operation Torch in North Africa, she became the star of *Home Sweet Home*, a musical programme with political commentary designed to make American personnel feel homesick. The show opened with the classic American sound of a train whistle, played American jazz and swing music, and featured Gillars – under the name Midge – in a seductive American voice. Her broadcasts attempted to spread doubt about the validity of the Allied cause and even alluded to unfaithful wives and girlfriends back in the States. Soldiers at the front who tuned in rarely called her Midge, preferring instead the Berlin Bitch or Axis Sally.

Much to Gillars' disdain, she would be joined by another Axis Sally, an Italian-American called Rita Luisa Zucca. Furthermore, a Japanese counterpart known as Tokyo Rose – real name Iva Toguri D'Aquino, a Japanese-American – shared in the infamy. Together with defected British broadcasters such as William Joyce, better known as Lord Haw-Haw, they sometimes had the power to ominously and often accurately describe Allied positions, their seemingly all-knowing voices unnerving listeners who had thought their movements were secret.

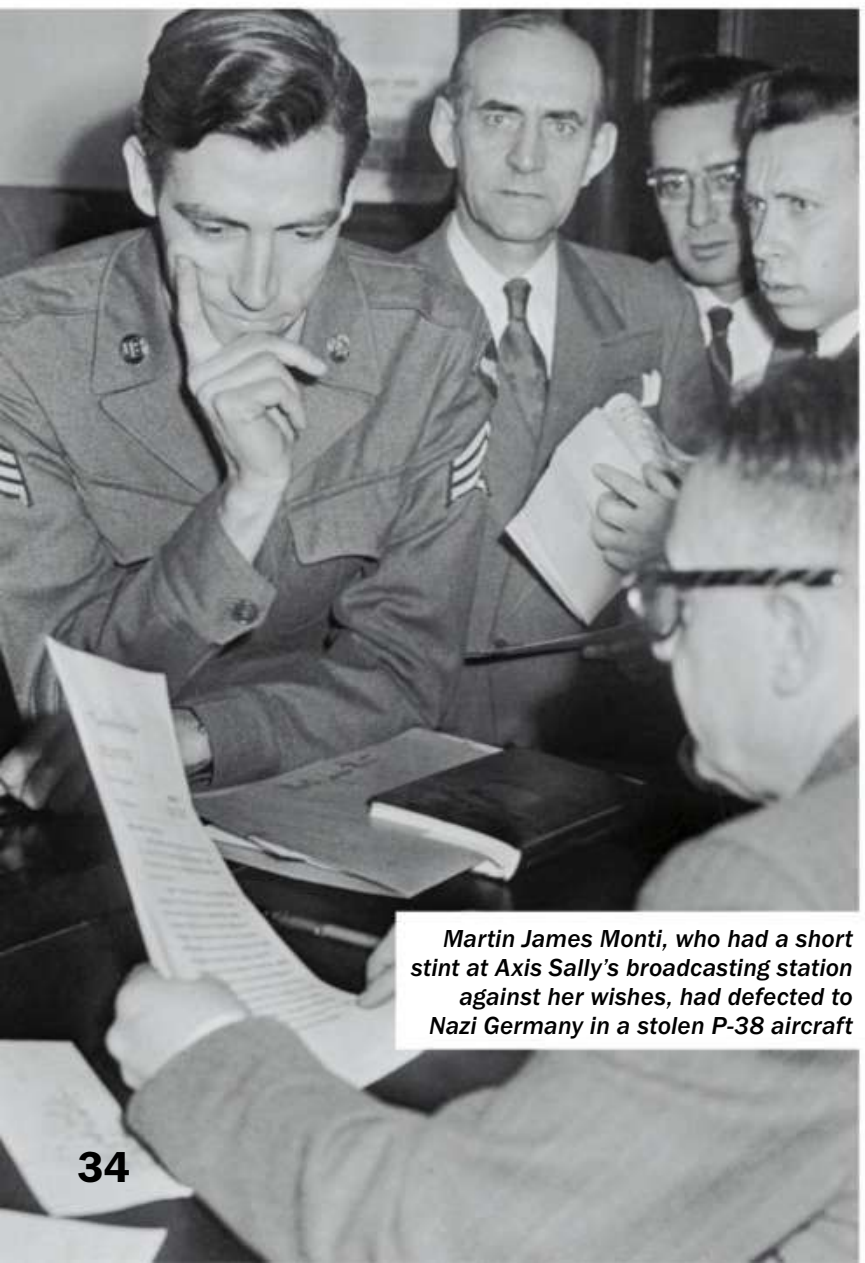
Christmas 1942 saw Gillars' and Koischwitz's bond change from colleagues to lovers – and with it the transition from down-on-her-luck actress to Nazi mouthpiece was complete. "Mildred pretty consistently argued [on air] that there was some sort of Jewish, Bolshevik or communist

***Below:** These American soldiers have tuned in to hear news of President Roosevelt's death, but many of them might've previously listened to Axis Sally's broadcasts*

The defence attorney James J Laughlin (centre) would face off against the prosecution's lawyer John Kelley, who eventually won over the Grand Jury

Images © Getty

“AMERICAN PRISONERS RECOGNISED GILLARS’ VOICE, REFUSED TO PARTICIPATE AND HURLED INSULTS AS SHE LEFT”



Martin James Monti, who had a short stint at Axis Sally’s broadcasting station against her wishes, had defected to Nazi Germany in a stolen P-38 aircraft

Axis Sally desired fame but received infamy and a 12-year jail sentence instead

Edna Gillars (right) remained supportive of her half-sister, even after Axis Sally was found guilty of treason

Battling Axis forces and the fierce heat of North Africa, American troops involved in Operation Torch became all too familiar with Gillars' radio persona

Gillars was temporarily released for Christmas 1946. However, the furore it caused at home prompted her re-arrest and return to jail

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***Above:** Japanese-American Iva Ikuko Toguri D'Aquino – dubbed Tokyo Rose – was a propagandist for the Japanese. Unlike Axis Sally, she sought a presidential pardon for her crimes, while Gillars maintained her innocence until her death*

conspiracy to destroy the civilised world and that, in fact, the Nazis were doing the world a favour by fighting the Soviets," says Professor Flamm. "But sometimes she also mixed in an anti-British message… that perhaps the British somehow lured the United States into war [against Germany] for their own interests, for the Empire." Combined with her broadcasted hatred for US President Franklin Roosevelt, she had all the makings of an American traitor.

The tightening noose

Axis Sally's stardom increased, including a show entitled *Midge at the Mike*, which reached out as far as North America to target mothers and partners of soldiers. But Koischwitz was keeping a secret from his mistress: it turned out that his wife was pregnant with their fourth child. When Gillars learned of the infant, she attempted to take her own life. Tragically, it would be Koischwitz's newborn who died after just a few hours. Nine days later Koischwitz's wife was killed in an Allied air raid that hit the hospital.

The radio-personality couple would nevertheless continue their lives together, both on and off air. With the tide of the war changing, Gillars' most notorious broadcast, *Vision of Invasion* in May 1944, was a drama where she played an Ohio mother foreseeing her son's death in a failed D-Day attempt. Additionally, Axis Sally arranged to interview Allied POWs at camps, editing their words to conform to propaganda angles and reporting – in borderline sadistic detail – the afflictions of the wounded to highlight the terrible cost of conflict. In one instance, a group of American prisoners recognised Gillars' voice, refused to participate and hurled insults as she left. Gillars began posing as an International Red Cross Red Cross representative to achieve her goals. Then, in August 1944, she received the shocking news that Koischwitz had unexpectedly succumbed to tuberculosis and heart failure.

The noose was tightening around Axis Sally. Deluded into believing that she had done nothing wrong, she disassociated herself with fellow American traitor Martin James Monti, who, having defected from the US military, had joined Reichsradio in early 1945. Gillars deemed him guilty of treason, while thinking she was innocent. It mattered little, though, as Nazi Germany was about to lose the war – and Gillars was a wanted woman.

The trial of Axis Sally

A fugitive in her adopted country for 11 months, Gillars was captured in the British Sector of Berlin on 15 March 1946. Upon her arrest, she requested to take only one item with her: a photograph of her beloved Koischwitz. Axis Sally spent two years in an Allied internment camp, without charges or legal representation, until her extradition to the United States in 1948. Her subsequent trial would bring to light numerous moral conundrums associated with the proceedings, not least whether words constituted a treasonous act against the United States of America. "It wasn't a fair trial," says Professor Flamm. "[The defence] had very limited resources. The Federal Government made no witnesses available to the defence who could have testified to the very real threat of arrest and deportation that Mildred faced. In other words, bringing up the idea that she was coerced into making this broadcast…"

Nor did Axis Sally help her own case, as Professor Flamm explains: "Mildred takes the stand [and] damages her credibility. She denies it was her voice on the radio, she refused to express any remorse for her actions… She always claimed that she knew nothing about the Holocaust, that she knew nothing about the fate of the Jews and would not apologise. And she made the point that she was an artist, not a propagandist. That, by the way, is an interesting thing to consider… [the] First Amendment [argument]: 'I'm an artist. This is my freedom of expression.' That's an interesting legal argument that wasn't fully pursued.

"Ultimately, Mildred was convicted on only one of the eight charges of treason. And that single charge was based on a radio drama… a *Vision of Invasion*, in which Mildred was, in fact, reading from a script… There was no free-form political commentary." It would still be enough for her to face 12 years in prison.

The legacy of an American traitor

Gillars remained unapologetic for the rest of her life, even after her 1961 release when she converted to Catholicism and became a teacher at an Ohio convent. She died of colon cancer on 25 June 1988, aged 87. Remarking on her legacy and whether Axis Sally was a victim of her lover's influence, Professor Flamm says: "Personally, I do not believe that Koischwitz was entirely the string puller or puppet master. I believe that Mildred has a substantial degree of responsibility. Her life patterns suggest she made choices and decisions, and she had to live with the consequences… Axis Sally today is a footnote in history… I doubt that in the future we will see many treason trials based on political propaganda or commentary given the scepticism about truths and facts in our world today."

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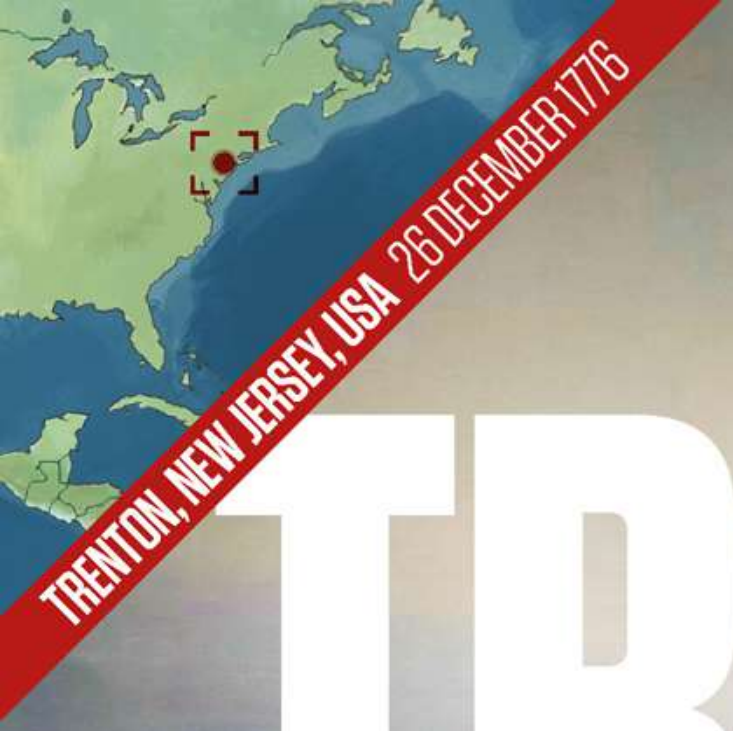

Great Battles

TRENTON

The battered Americans hatch a bold plan to turn the tide of the War of Independence

WORDS **DAVID SMITH**

As 1776 drew to a close, the rebel army under George Washington had suffered a string of demoralising defeats. Worse than that, they had often proved unable to stand against the larger British army, led by General William Howe. The Americans had broken and run at the Battle of Long Island and during the British landings on Manhattan. They had suffered further defeats at White Plains and Fort Washington and the campaign had apparently ended with Washington in full retreat, scrabbling to hold together the remnants of his army.

As Christmas approached, the British settled down for a winter in New York and made plans for their 1777 campaign. Howe prepared an overwhelming combination of operations and the revolutionary cause looked to be on the verge of dying, but while Howe made his plans for the following year, Washington had ideas to act much sooner.

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OPPOSING FORCES

UNITED STATES	VS	GREAT BRITAIN HESSE-CASSEL
COMMANDER George Washington		**COMMANDER** Johann Rall
TROOPS 2,400		**TROOPS** 1,500

"WHILE HOWE MADE HIS PLANS FOR THE FOLLOWING YEAR, WASHINGTON HAD IDEAS TO ACT MUCH SOONER"

The Passage of the Delaware by Thomas Sully shows George Washington after crossing the River Delaware at the Battle of Trenton

Why did Washington attack the British at Trenton?

When the British ended their offensive operations for the year, they went into 'winter quarters'. This included an extensive string of posts in New Jersey, intended to encourage loyalists in the colony to feel confident enough to join the British cause. The posts were also necessary to ensure Howe could find enough forage for his horses. Howe was aware that he was stretching his resources thinly, nevertheless he believed the rebel army was a spent force and did not deserve the respect that he would have shown a more accomplished enemy.

Washington was in the depths of despair, knowing that his army was on the brink of complete collapse and seeing no hope of support from the local population. His numbers had dwindled to around 3,500 and only the Delaware River was between him and the British. As the weather worsened, the river would freeze and Washington feared the British would then cross it in force to hunt down his tiny army.

On the verge of losing the war, Washington listened to the advice of Colonel Joseph Reed, who had looked at the British posts in New Jersey and come to the same conclusion as Howe – they were spread too thinly – and Reed believed an attack was possible. The post at Trenton was the most tempting target, and the raising of a small number of militia gave Washington the numbers to try something wildly ambitious.

The Trenton garrison

There were three regiments (the Knyphausen, Rall and Lossberg Regiments) at Trenton. These were Hessians, German troops hired by the British to boost their numbers, but there were 20 or so men of the 16th Light Dragoons (a British unit) as well. Their total numbers were around 1,300 to 1,400.

There are many myths surrounding the Battle of Trenton, one of them being that the garrison

***Below:** The Washington Crossing Historic Park preserves the site where Washington crossed the Delaware River*

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BATTLE OF TRENTON

26 DECEMBER 1776

01 CROSSING THE DELAWARE
Washington's men cross the icy Delaware river at night without suffering a single casualty.

02 SULLIVAN'S CORPS ADVANCES
After splitting into two divisions to attack the town from different directions, Sullivan's men advance along the River Road.

03 THE ATTACK FROM THE NORTH
Greene's men, accompanied by Washington, attack the town from the north, sparking a fierce response from the Hessian garrison.

04 THE HESSIAN GUNS
A pair of Hessian guns on King Street become the focal point of the battle, eventually falling into the hands of the Americans as the Hessian commander is struck down.

08 A DESPERATE ESCAPE

A few men are desperate enough to swim the Assunpink to safety, but the majority of the garrison of Trenton has been either killed or captured.

07 REFUGE IN THE ORCHARD

The Lossberg and Rall Regiments lose heart after Colonel Rall is mortally wounded and attempt to find cover in an orchard on the edge of town, but are soon surrounded.

06 NO WAY OUT

The Knyphausen Regiment attempts to withdraw from the battle, but finds the bridge is occupied. They circle back towards town but are forced to surrender with their backs to the creek.

05 TAKING THE BRIDGE

Sullivan's men move through the town quickly and take control of the only bridge over the Assunpink Creek, cutting off the Hessians' line of retreat.

Map: Nicholas Forder

was drunk after celebrating Christmas and was caught completely off guard. This was far from the truth, as the German soldiers had been forced to remain alert thanks to continuous guerrilla actions from patriot militia.

The Hessian commander, Colonel Johann Rall, had performed well at the Battle of White Plains and the taking of Fort Washington just weeks earlier. His orders ensured that one out of the three regiments was always on high alert and ready for immediate action, but elsewhere he showed signs of laxness. He failed to build defensive redoubts in the town, despite being advised to do so by his engineers.

Also working against the Hessians was the fact that the repeated militia attacks had worn down their nerves over the preceding weeks. A garrison can only stay at peak alertness for a limited amount of time before fatigue sets in, and this was almost certainly the case with the German soldiers as they endured a miserable winter far from home.

Washington's plan of attack

This was to be the first major offensive operation planned by Washington. So far, he had tried to re-create the success at the Battle of Bunker Hill the previous year, when the Americans had built strong defences and inflicted over 1,000 casualties on the attacking British before giving way. Washington had therefore adopted strong defensive positions on Long Island and at White Plains, hoping that Howe would suffer heavy losses in an assault, but the British general had been cagey. Howe had commanded the British at Bunker Hill and was not eager to repeat the experience of attacking entrenched Americans.

"IF THE GARRISON COULD BE SURPRISED, WASHINGTON MIGHT HAVE A MORALE-BOOSTING VICTORY WITH WHICH TO END THE YEAR"

Now Washington was stepping out of his comfort zone, putting together a plan that invited disaster for several reasons. The weather was appalling, and his troops were inexperienced and dispirited. They would have to cross a river that was made hazardous by floating blocks of ice and they were attacking an experienced and alert foe. Most worryingly, however, was the nature of the plan itself. It was complex and depended on three separate bodies of men crossing the Delaware at different points and coordinating their assault.

The plan was for the three corps to cross the Delaware on the night of Christmas Day. A force of 800 Pennsylvania militia was ordered to cross below Trenton and seize the bridge out of town over Assunpink Creek. This was an obvious escape route for the Hessians and sealing it off would prevent them from disengaging easily. Brigadier General James Ewing was given command of this small corps.

Colonel John Cadwalader (temporarily elevated to the rank of brigadier general for this operation) was given 1,800 men, a mixture of militia and regular infantry from the Continental Army. They were to stage a diversionary raid further south, grabbing the attention of the garrison at Bordentown and preventing them from coming to the relief of Trenton.

Washington saved most of his best men, 2,400 Continentals, for the main body. He would

***Left:** Washington's daring, decisive leadership at Trenton transformed the rebels' fortunes in the American War of Independence*

Images © Getty

command this corps, landing about nine miles (approximately 15km) north-west of Trenton and descending on the town just before dawn on Boxing Day. If the garrison could be surprised, Washington might have a morale-boosting victory with which to end the year.

What problems did the American troops face?

Crossing a river in the middle of winter is always difficult, and the weather was bad as the three columns set off to their respective destinations. As if Washington did not have enough to worry about, he received word just before leaving that General Horatio Gates was planning to address Congress, advocating the abandonment of the northern colonies and bringing the army south. This would have been a clear condemnation of Washington's performance and would undoubtedly have meant a change of command. As he started his march to Trenton he would have been aware that this might very well be his last chance.

A storm blew up as the rebels marched, making an already miserable experience even worse, but it actually proved beneficial. The Hessians did not believe it would be possible to launch an attack in such weather and they cancelled their usual pre-dawn patrol for the following morning. Another slice of good luck had already fallen the Americans' way – Colonel Rall had been warned of an imminent attack, but a small-scale raid of no more than 50 men had taken place on Christmas Day. Rall believed this to have been the rebel attack and the Hessian post was slightly more relaxed than usual as Washington's men plodded towards it.

The plodding was far too slow for the rebels to stay on time. They were three hours behind schedule when they reached the Delaware and took longer to cross than anticipated. Even so, it was a remarkable feat as nobody was lost in the crossing. Even more impressive was the fact they brought artillery with them and didn't lose a single gun.

Despite this achievement Washington had no way of knowing that his plan had already unravelled: his was the only one of the three corps to have safely crossed the river. The attack on Trenton would have to go ahead without any diversionary action and with the escape route over Assunpink Creek open.

The march was brutal and at least two American soldiers died of exposure. Halfway to Trenton, Washington divided his force into two groups, intending to attack at the exact same moment from different sides of the town. To facilitate this, he ordered his officers to synchronise watches, one of the very first times this tactic was employed. Finally, he sent two 40-man patrols to gather up anybody in the vicinity and prevent them from warning the Hessians. The attack was behind schedule, but it was still moving ahead. By 8am, the Americans were ready to strike.

***Below:** The American forces managed to cross the treacherous River Delaware without losing a single man or artillery piece*

Intense fighting around two Hessian cannons saw the weapons change hands several times before finally being captured by the American forces

The Hessian response

The first Hessian soldiers to be attacked were manning a small outpost. They kept their heads, returned fire and withdrew to the town to raise the alarm. If Washington had hoped to provoke panic in the garrison it looked like he had failed.

Although calm, however, the Hessian officer in charge of the outpost, Lieutenant Wiederholdt, was confused. He told Rall that Trenton was surrounded and the Hessian commander ordered a counterattack rather than gathering his men and withdrawing across the unguarded Assunpink bridge to the high ground on the other side of the creek.

Fighting became fierce as the garrison turned out and counterattacked. Washington and Nathanael Greene commanded the corps moving in from the north, while John Sullivan moved in from the west. Fighting became intense around two Hessian guns, which changed hands several times until Washington's men finally possessed them and turned them on their former owners. Around the same time, Rall was struck by two musket balls and fell, mortally wounded.

The situation was still far from desperate, but the Hessians crumbled without their commanding officer. The Knyphausen Regiment attempted to withdraw across the Assunpink, but elements of Sullivan's corps had now taken control of the bridge. The Lossberg and Rall Regiments retreated into an orchard to the east of the town and were soon surrounded.

"WASHINGTON BRIEFLY CONSIDERED CONTINUING ON A RAMPAGE THROUGH THE BRITISH POSTS"

Outnumbered, badly shaken and with no line of retreat, the Hessians surrendered. The fighting had been brief but intense, and the Hessians had suffered 106 casualties, including 22 dead. More than 900 of them were captured, while some escaped by whatever means they could – even swimming over the icy Assunpink.

The aftermath

Washington had secured a remarkable victory. Only a handful of his men had been wounded in the attack and his boldness had been entirely vindicated. At the time, he lamented that he was not able to follow up his success. By now he knew that the other two corps had failed to cross the Delaware, so his numbers were too low to risk an attack on Bordentown, which would be in a state of readiness by the time he arrived there. Reluctantly, he ordered his men to return to their base.

Still, the American commander was aware of how important a blow had been struck, and he knew that the effect would be greatly magnified if he could follow up the attack with another success.

Washington's new-found aggression was spurred on by some surprising news. With his men safely back at their base, he heard that Cadwalader's corps had managed to cross the Delaware after all. They were a day late, but they were stubbornly refusing to return to base without at least attempting something.

Washington was running up against a familiar problem: his men's enlistments were due to run out at the end of the year. He offered a bounty of $10 to any man who would agree to remain in the ranks for a further six weeks and the majority of his men, freshly enthused by their success, agreed. This gave Washington the numbers to take a huge risk: it was one thing crossing the Delaware while the British and Hessian troops were not expecting it, now they would be crossing again with the country stirred up like a hornets' nest.

Howe had been frustrated by the reversal at Trenton, which threatened to unravel much if not all of the good work he had accomplished during the campaign. From Princeton he sent his best men, commanded by one of his best officers, to retake Trenton and restore control.

Lord Charles Cornwallis was one of Howe's most aggressive generals and he set out from Princeton on 1 January 1777 at the head of some of the best units in the British Army. The light infantry battalion, British and German grenadiers, Hessian jägers, British Guards and the 16th Light Dragoons made up a daunting opponent for Washington's men. Crucially, Washington had moved quickly and

***Above:** The Capture of the Hessians at Trenton by John Trumbull depicts the Americans' triumph*

***Above,left :** Colonel Rall is mortally wounded in the late stages of the battle*

had crossed the Delaware, linked up with Cadwalader and reoccupied Trenton before Cornwallis reached him. The stage was set for the Second Battle of Trenton, and this would be a far more costly affair.

What happened at the second Battle of Trenton?

On 2 January, Cornwallis arrived to find Washington in control of the town. The American general quickly recognised he was in danger but a full withdrawal was impossible, as it would take hours to recross the Delaware to safety. He therefore ordered his men to cross the Assunpink and took up a defensive position on the high ground there, demonstrating exactly what Colonel Rall should have done just days earlier.

The strength of Washington's position was made clear as Cornwallis launched repeated attacks throughout the day, knowing what a serious blow it would be to the revolution if the rebel commander-in-chief was captured or killed. The Americans held firm, inflicting around 350 casualties on the British and German forces desperately trying to get across the icy creek.

When dusk brought an end to the fighting for the day, both camps lit fires, prepared supper and contemplated the following morning, when Cornwallis would undoubtedly attack again. Washington, who had suffered just 50 casualties, could see that the British must find a way across the creek eventually, and he decided not to give them a chance. Leaving his campfires lit as a diversion, he withdrew his men in silence.

Washington headed to Princeton, which was now defended by just a small garrison. Cornwallis had called up reinforcements from Princeton and Washington's army met 700 British troops marching to Trenton the next day. The ensuing battle (known as the Battle of Princeton) gave the British garrison time to evacuate and remove a large amount of supplies, so when Washington's men finally occupied the town their only reward was glory.

It was enough, however, to reinvigorate the revolutionary cause. Washington briefly considered continuing on a rampage through the British posts, but the conditions were still harsh and his men were exhausted. He decided to get out while he was ahead and was soon crossing the Delaware for the fourth time in a week.

What were the consequences of the battles at Trenton?

Washington had inflicted around 1,700 casualties on Howe's army. With reinforcements needing to come all the way from Europe, this was no small matter for the British. Even more important was the fact that Washington had shown his men could fight and win against professional soldiers.

The overall effects of the raids went far beyond their scale, however. Howe felt that covering the entirety of New Jersey was no longer feasible and he drew his men into a much more limited string of posts. The impression given was unavoidable – he was unable to protect loyalists in the state. On the flip-side, American patriots were emboldened and guerrilla actions against the occupying forces increased.

On top of all this, Howe chose to see the setbacks as evidence that the loyalist population in New Jersey was not as strong as he had once believed, and this caused him to change his entire planning for the 1777 campaign. While he had once talked of ambitious operations against the rebels on multiple fronts, his plans became more and more timid, until he proposed to do little more than capture the capital city of Philadelphia.

Howe's change of heart was a key contributing factor in the failure of another British army, under John Burgoyne, pushing down from Canada the following year. Howe had originally intended supporting this army, but in his revised plans he left it to fend for itself and the result was a decisive defeat for Burgoyne at Saratoga in October 1777.

The rebel victories at Trenton and Princeton were small in scale but have been cited by many as the turning points of the Revolutionary War. Undoubtedly they served notice that the patriot cause was not going to die without a fight.

Images © Alamy, Getty

INSIDE THE FORTIFIED CHURCHES OF TRANSYLVANIA

WORDS **JONATHAN HATFULL**

Standing on the hilltops of the Transylvanian countryside, the mighty fortified churches protected their citizens throughout centuries of Tatar and Ottoman invasion

When we think of Transylvania, we usually think of the dark forests, the looming mountains and, perhaps inevitably, Count Dracula. For any visitor planning to pack their stakes and garlic to visit the ancestral home of Bram Stoker's creation, however, they should prioritise finding room for walking shoes and a camera, and that the very first item on their agenda should be the stunning fortified churches. However, these defensive bulwarks were in fact not designed to hold back the children of the night. "There's no place for vampires in Transylvania," affirms Uncover Romania's Diana Condrea.

What there is a place for is the highest concentration of fortified churches anywhere in the world. Standing as imposing monuments to centuries past, these stunning combinations of religious devotion and military defence are the legacy of the region's complicated and often violent history, the struggles of the men and women who lived here, and help make this part of Romania so unique.

There are seven fortified churches on the UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage list, and there are upwards of 150 still standing, although it should be noted that not all of them are in the best condition. "Only a few of them are properly conserved and, unfortunately, some have recently collapsed," Condrea, a tourism consultant and travel writer, told us. "Efforts are, nonetheless, being made by local foundations, like Mihai Eminescu Trust, to rehabilitate them."

But why are there so many? The short answer is: defence. Transylvania may now be part of Romania, but historically it has always been a contested region. In the 12th century it was the gateway to the Hungarian Empire, which had conquered Transylvania several decades previously.

It was King Géza II who invited German settlers into the region in the 12th century to establish towns and secure the region. They were granted a great deal of autonomy as an incentive and the new arrivals, most of whom were Saxons, set to work building their own towns, at the centre of each of which was a church.

***Above:** The fortified church at the village of Harman in Brasov County. The original structure dates back to the 13th century*

Images © Alamy, Getty

The Saxon presence grew in the 13th century after King Andrew II regretted inviting the Teutonic knights into the region. The military religious order were attempting to found a state of their own, and as part of his effort to get rid of them, Andrew granted the Saxons even more privileges and autonomy with his Andreanum decree of 1224. With the freedom to elect their own local authorities and clergy, and only a single yearly payment to the king due in lieu of taxes, the Saxon presence in Transylvania flourished, and more and more towns grew.

But this was not a one-way street. The defence part of the arrangement became apparent in the 13th century. The Cuman threat had mostly dissipated by this point, but the Tatar invasion in 1241 was a sharp reminder of how quickly this area could be overrun. Transylvania was absolutely devastated by Genghis Khan's armies, and Hungary itself was on the brink of collapse. The Tatar forces may have withdrawn a year later, but the need for fortifications to protect the territory and settlers who lived there, was clearly vital. The towns and churches that had been destroyed needed to be rebuilt, and they would need to be strong enough to withstand an attack.

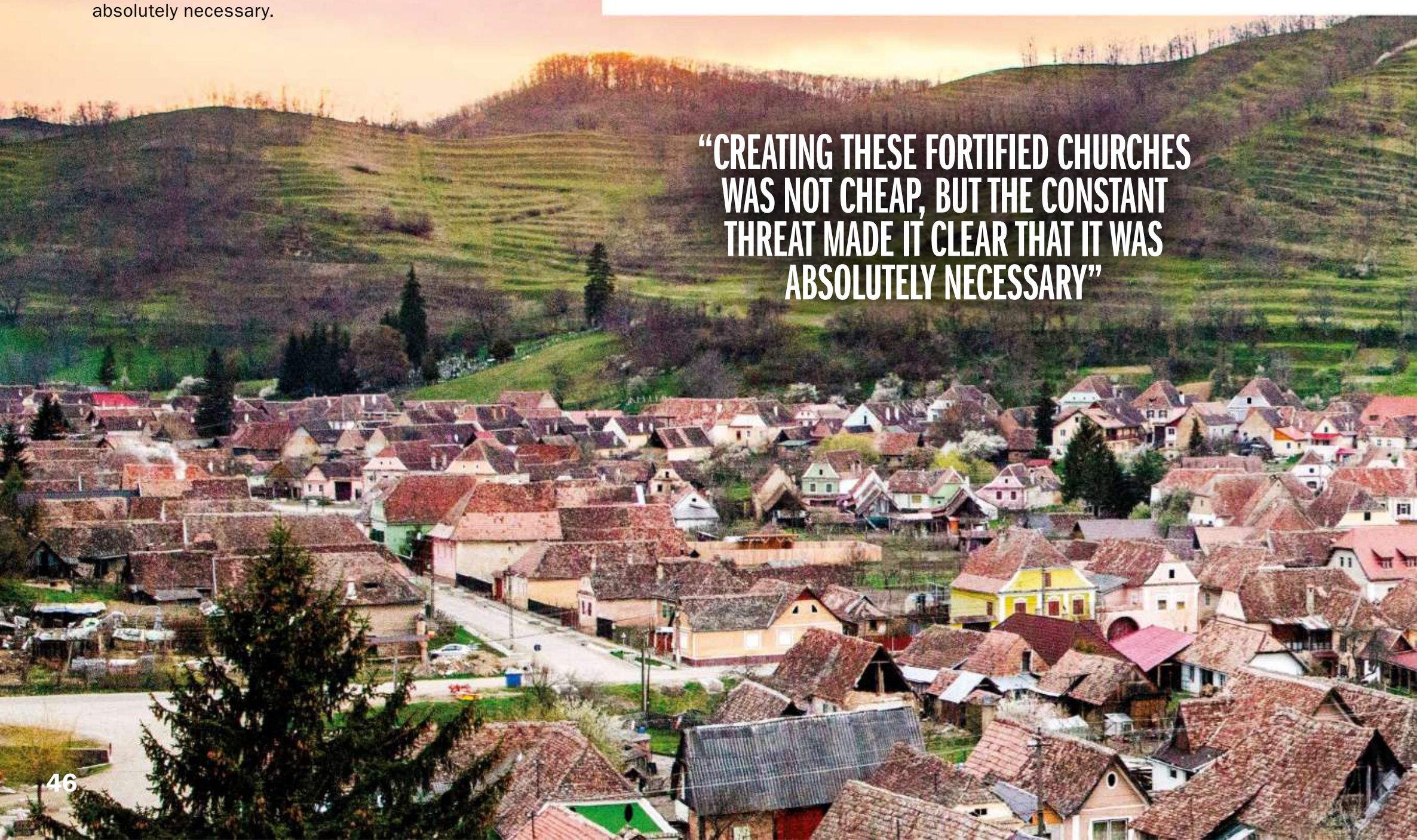
"It's after this disaster that Hungarian authorities urge the fortification of the border villages where the German colonists had settled," Condrea says. "The colonists apply the military know-how from their home country, either building fortresses like in Saschiz or fortifying the existing church."

Another unique element in the construction of these fortifications is that they were created not by nobility, but by the church and by the Saxon settlers between the 12th and 15th centuries to protect and conserve. "They adapted their churches to serve as fortresses, adding a military purpose to their main religious and spiritual function," explains Condrea. "The hundreds of fortified churches they built combined these essentially different functions, the religious space becoming a functional one where locals could sleep, deposit their goods and animals and, most importantly, be safe for longer periods of time." Creating these fortified churches was not cheap, but the constant threat made it clear that it was absolutely necessary.

THE 7 UNESCO-PROTECTED CHURCHES

These churches have been chosen as World Heritage sites by UNESCO for their similar patterns of land use and excellent preservation since the Middle Ages

Biertan **Biertan is one of the largest of Transylvania's fortified churches. The first known mention of it dates back to 1283, and it has seven towers and three levels of defensive walls, 10m high. It converted from Catholicism to Lutheranism, but kept a Catholic tower for those who did not.**



"CREATING THESE FORTIFIED CHURCHES WAS NOT CHEAP, BUT THE CONSTANT THREAT MADE IT CLEAR THAT IT WAS ABSOLUTELY NECESSARY"

Viscri

Viscri comes from the German word Weisse Khirche, which translates as white church, and was actually taken over from the Szkélers by the Saxons, rather than built by them. Although much was destroyed in the Tartar invasion and later defensive modifications were made, it remains one of the oldest in the region.

Câlnic

Built in 1269 by nobleman Chyll de Kelling, it was sold to the village in 1430, and work on a new church and defensive additions began in the 16th century. With two fortified walls (and, at one point, a moat), it's best known for the imposing Siegfried tower, which helped defend the church during the Ottoman invasion.

Dârjiu

Because of its lofty location, the wall surrounding the Dârjiu church was relatively low, but the Gate Tower offered plenty of opportunities for defensive action, and the fortress offers a stunning example of Gothic architecture. It's still very functional today, as locals keep their grain in the barn.

Prejmer-Tartlau

Originally started by the Teutonic Knights in 1218 and completed by the Cistercians, its formidable design (protective wall, five towers, a moat) are due to the fact that it was located in a crucial spot on the Buzau Pass, through which invaders had to travel, and it was often under attack.

Saschiz-Keisd

A beautiful (and huge) example of late Gothic construction, Saschiz-Keisd was created between 1493 and 1525, and is a rare example of a fortified church not being located at the centre of a town. Instead, it's 2km away, to enable villagers from other towns to take advantage of its protection.

Valea Viilor

A Lutheran church built on the ruins of a Romanesque one, the fortified church at Valea Viilor is more than double the size of the building it replaced. With its enormous defensive bell tower and 8m tall walls, it's an imposing sight, and there is a fresh-water well in the middle of the choir.

Images © Alamy

FIND BIERTAN'S HIDDEN TREASURES

The fortified church at Biertan holds beauty within to equal its spectacular architecture. Here are the must-see features to seek out on your visit

THE ALTAR

Biertan church's altar is the largest in Transylvania. Sculpted from wood, the altar displays 28 icons portraying scenes from Holy Scripture. It was created between 1482 and 1513 by artisans from Vienna and Nuremberg, and at the centre is a beautiful crucifixion scene.

BELL TOWER

CLOCK TOWER

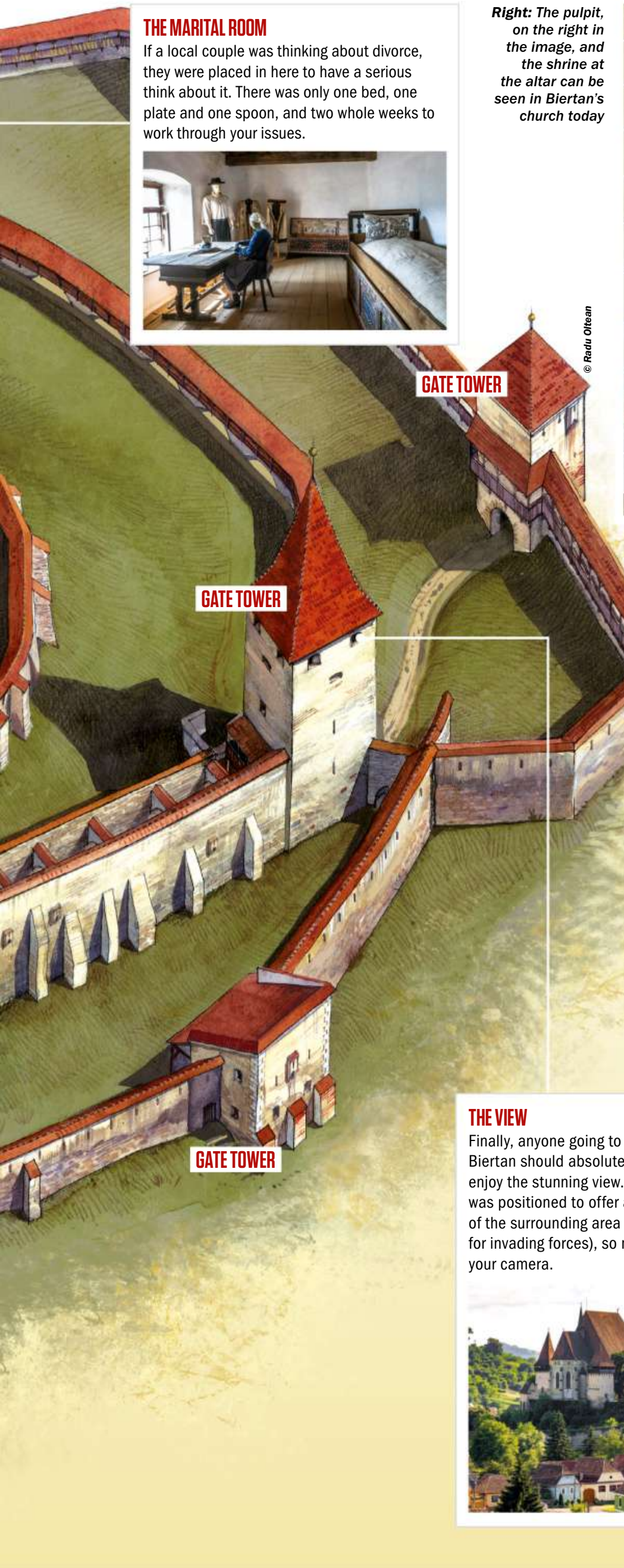
GATE TOWER

THE SACRISTY DOOR

The incredibly intricate sacristy door was built in 1515. It has a complex and innovative system of closing, and staying closed, that is comprised of 19 locks being activated simultaneously. It is so impressive that it was exhibited at the Paris World's Fair in 1900.

THE PULPIT

The stunning pulpit is one of the true treasures of the Biertan church. Carved from a single piece of rock and dating back to 1523 with biblical scenes carved in relief, it's a beautiful example of the transition between Gothic and Renaissance styles.



© Radu Oltean

THE MARITAL ROOM

If a local couple was thinking about divorce, they were placed in here to have a serious think about it. There was only one bed, one plate and one spoon, and two whole weeks to work through your issues.

THE VIEW

Finally, anyone going to the church at Biertan should absolutely make certain to enjoy the stunning view. The fortified church was positioned to offer a commanding vista of the surrounding area (to keep an eye out for invading forces), so make sure you have your camera.

***Right:** The pulpit, on the right in the image, and the shrine at the altar can be seen in Biertan's church today*

© Alamy

They were, for the most part, built in locations that could act as defensive and observational positions, which is the reason why they strike such a powerful impact on visitors today, standing as watchtowers and guardians on the region's hilltops. There's no doubt about their military effectiveness: the bell towers were indeed towering, the pyramid tower shapes meant that projectiles rolled off to prevent the burning of the church, defensive platforms were added to the church choirs, walls were built around the exterior… but they never lost their religious function.

Over the course of the next few centuries the defences would be put to frequent use, as the Ottoman Empire was a constant threat to the people of Transylvania. After the Hungarian Empire fell to the Ottomans, Transylvania was given relative autonomy, but the region was rarely peaceful and rebellions and counter-rebellions lasted through the 17th century. It was a time during which stability was rare, and the different building styles reflect just how urgent the danger was at the time. As the Ottoman threat grew, so did the churches.

"WHAT REMAINS IS EXTRAORDINARY, A REMINDER OF THESE PEOPLE'S FAITH AND THEIR FORTITUDE"

"There are three types of fortified churches, influenced by the time of their construction," explains Condrea. "The first type has most of the fortifications outside the church like in Prejmer while in the second case, like in Biertan, the church was substantially reinforced, including by adding defensive levels, towers and bastions besides the fortification walls that surrounded the church. The third type appears in the late 15th century. In this case, the churches have an original defensive structure, like in Saschiz."

What remains is extraordinary, a reminder of these people's faith and their fortitude, and the dangers of the times in which they lived. While Biertan may be the most renowned, Condrea tells us that going off the beaten track is essential.

"Visitors should also include less famous fortified churches besides the ones from the UNESCO Heritage Patrimony," she enthuses. "To make the best out of their trip, I would suggest taking accommodation in a traditional village (Malancrav, Crit, Viscri, Alma Vii are excellent options) and do the tour partially on bike. This way the experience is complete."

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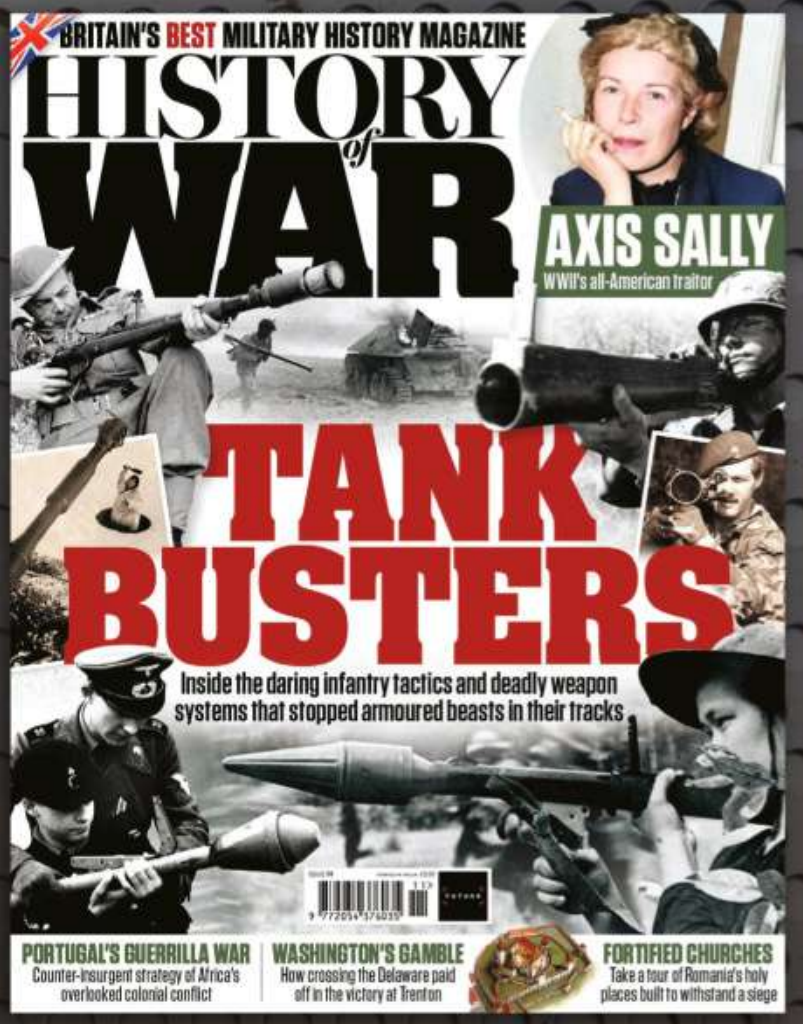
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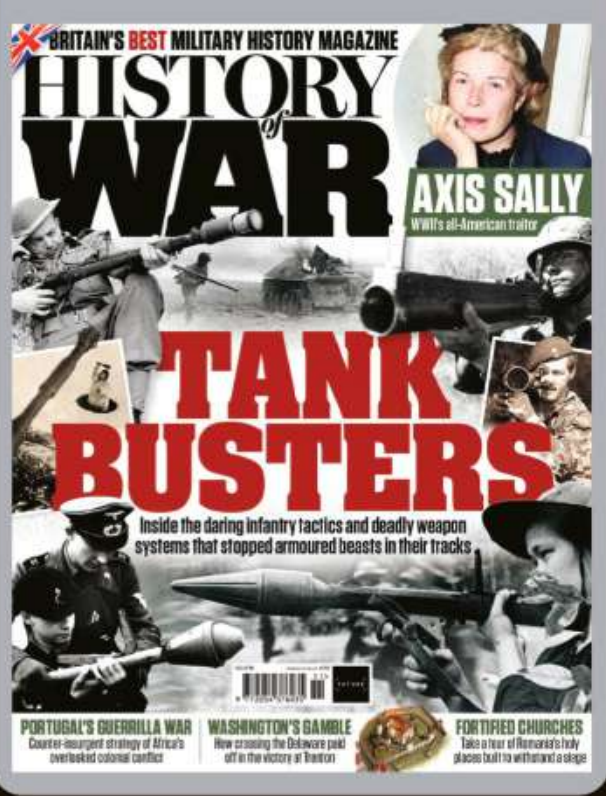
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“MAJOR PORTEOUS’S MOST GALLANT CONDUCT, HIS BRILLIANT LEADERSHIP AND TENACIOUS DEVOTION TO A DUTY WHICH WAS SUPPLEMENTARY TO THE ROLE ORIGINALLY ASSIGNED TO HIM, WAS AN INSPIRATION TO THE WHOLE DETACHMENT”

VC Citation

Porteous, born in Abbottabad, British-held India (present-day Pakistan), was the son of a Gurkha officer and belonged to a soldiering family dating back generations

© Getty

Heroes of the Victoria Cross

PATRICK ANTHONY PORTEOUS

Amid the disastrous Dieppe Raid of August 1942, this 24-year-old officer took command of a depleted unit, saved a comrade, and led a charge against enemy positions

WORDS **ALEX BOWERS**

The German was quicker to raise his weapon as he took aim at Captain Patrick Anthony Porteous and fired. The bullet struck Porteous' left hand, passing into his arm. But the young liaison officer, serving as a temporary major with No. 4 Commando, had little time to feel the pain or worry about the blood gushing from his wound. The enemy steadied his gun, ready for another shot. Surely this was it – the moment he died.

It was 19 August, 1942, and Porteous was in Dieppe, France, for Operation Jubilee. While the Canadians were about to be slaughtered on the beaches surrounding the coastal commune, his party of special forces was tasked with destroying the 'Hess' battery that overlooked Allied shipping. The plan, created by No. 4 Commando's lieutenant colonel and Scottish Fraser clan chieftain Lord Lovat, had been quite simple. There were to be two parties, the first of which numbered 88 men under Major Mills-Roberts and would land on the codenamed Orange Beach 1. After navigating up one of the gullies in the cliffside, Group 1 would make its way past the edge of Varengeville to within range of the battery. There, it would provide covering fire for the second party, which, having arrived on Orange Beach 2 a mile west of Quiberville, would capitalise on an already engaged enemy and launch the actual assault from the rear 15 minutes later. The far flanking manoeuvre of the 164-strong Group 2, involving Porteous, was intended to take the Germans by surprise. Meanwhile, on the other flank of Dieppe, No. 3 Commando would participate in similar actions against the 'Goebbels' battery at Berneval.

***Above:** American Rangers and British Commandos, seen here sharing cigarettes, wore thin denim and woollen cap comforters instead of cumbersome equipment for the raid*

Earlier that morning, No. 4 Commando – consisting chiefly of a British force alongside a handful of American Rangers, Free French soldiers and Canadian signallers – had tried their best to hold their nerves aboard the former Belgian cross-channel ferry Prince Albert. With the men still full from a stew supper and rum ration, Lord Lovat had urged them forward, saying: "This is not the hour for a speech… But I'd like to say this is the toughest job we've had, and I expect every man to contribute something special… I know you'll come back in a blaze of glory." Of course, not everyone would come back. The two parties nevertheless filed into their landing craft and began the daunting journey towards the shoreline. It was then that Porteous glimpsed a strange sight on the horizon: what appeared to be fireworks going off to the east, close to No. 3 Commando's position. In reality, the Allied flotilla had stumbled into a German convoy en route from Boulogne to Dieppe, whereby a fierce fight had broken out. The unexpected confrontation would disrupt No. 3 Commando's operation significantly, yet No. 4 Commando's target remained quiet in the pre-dawn darkness broken only by the planned Spitfire attack against the lighthouse that served as a German observation area.

By the point that Group 2 had cleared their beach, suffering several casualties as a result, the first party was well established inland. Porteous could hear the sound of not-too-distant gunfire coming from Group 1. The fair-haired Scotsman later discovered that the first party had seen the Hess battery open up against the Allied vessels. Recognising that the German six-gun position needed to be silenced ahead of schedule, Mills-Roberts' men had kickstarted the assault prior to Group 2's flank movement. As Lovat's second party approached the target to assist, an almighty explosion shook the ground beneath them. It turned out that a lucky shot from a mortar team, plunging into a stack of unprotected cordite, had achieved the objective of preventing the battery from firing. However, the enemy continued to resist the artillery's total destruction.

Group 2's HQ unit advanced between and behind B and F Troops, utilising the woodland cover to conceal them. F Troop subsequently divided with its B and HQ counterparts as it ventured down a road that led to the battery. The open ground proved deadly, as the exposed area was in full view of German troops in buildings around the perimeter. Though a truckload of enemy reinforcements was successfully beaten back, F Troop's luck ran out when their commander, Roger Pettiward, was killed by a sniper and the other section commander, John McDonald, died from a stick grenade blast. Acting Major Porteous was now the most senior officer – but he too was about to face death.

"IN THE INITIAL ASSAULT MAJOR PORTEOUS... WAS SHOT AT CLOSE RANGE THROUGH THE HAND... UNDAUNTED, MAJOR PORTEOUS CLOSED WITH HIS ASSAILANT, SUCCEEDED IN DISARMING HIM AND KILLED HIM"

VC Citation

At least that's what he thought. The German who had shot him had turned his weapon towards another comrade, believing Porteous was out of action. Seizing the opportunity, the Scotsman was said to have killed the assailant with a bayonet. Not only had his comrade survived to fight on – Porteous himself intended to stay in the struggle. The battle-hardened veteran bandaged his hand and rallied F Troop onward. On cue at 0620hrs, Allied fighters strafed the battery. Minutes later, Lord Lovat raised his flare pistol, fired three white signal cartridges, and instigated the final charge against the heavily defended artillery pieces.

One British Commando gave his recollection of what happened next: "All pandemonium broke loose. It was total confusion, really, because anyone who wasn't a Commando you recognised, you just killed… Some [Germans] were quite brave… but they really didn't get a chance..." Porteous and his men, their bayonets pointed at the enemy, joined the desperate attack beyond the barbed wire, past the machine guns and into the battery pits themselves. Something then thudded into Porteous' thigh. He had been hit again, mustering enough energy to stagger a few more steps before collapsing.

There could be no brushing off his injuries this time, although he stayed conscious to see the plastic explosives do their job of decimating the battery once and for all. Commandos laid out their dead respectfully and hoisted a Union Jack over the wreckage. Four Germans prisoners were then ordered to help the wounded, including Porteous, who soon found himself being carried away on a blown-off door. Above them, a formation of Me Bf 109 fighters swept overhead. Rather than duck for cover,

***Below:** Lord Lovat at left checks papers after the Commando Brigade arrive back at Newhaven after the raid*

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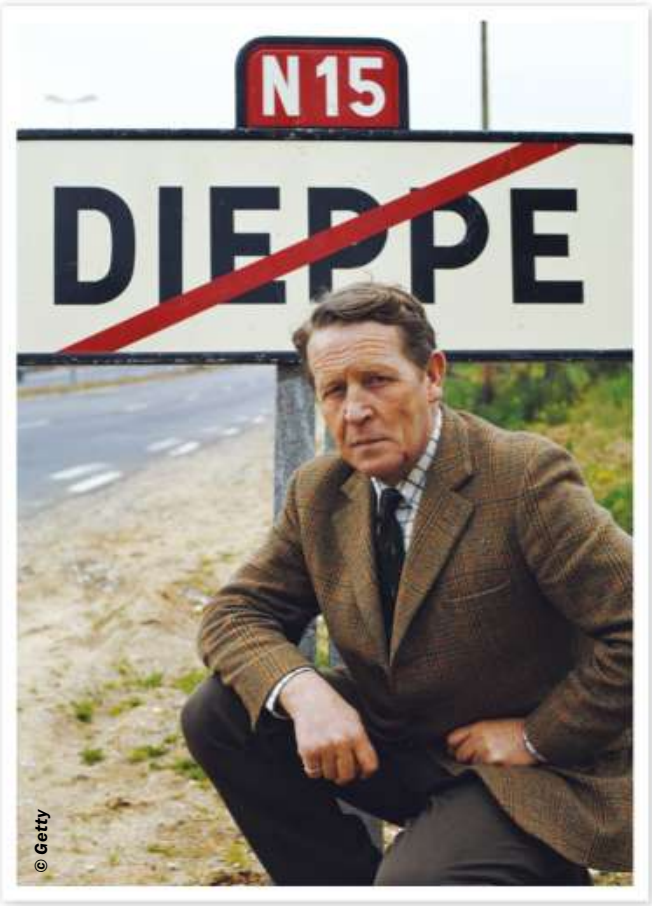
Lovat merely raised his arm and waved at them, praying they'd be mistaken for Germans. The genial gesture worked, and the German aircraft waved back. The evacuation to the boats went smoothly enough, except perhaps for Private Michael Faille and Private Paul J Karesa, the two Canadian radio operators who could hear the agonising transmissions from their countrymen suffering on the codenamed Green, Blue, Red and White Beaches of Dieppe. Ultimately, the disastrous raid cost more than 3,000 dead, wounded or captured, most of whom were Canadian. It would also be where US Ranger Lieutenant Edwin V Loustalot lost his life, the first American soldier killed by the Germans on European soil during World War II.

No. 4 Commando, in particular, had lost over a dozen killed, 20 wounded and 13 missing. Its sacrifice and the heroics that went with it would not go unrecognised. Lord Lovat received the Distinguished Service Order (DSO), Major Mills-Roberts was awarded the Military Cross (MC), and a number of other servicemen were rewarded for their bravery. Among them was Porteous, who, upon recovering from his wounds in a Canadian military hospital, was presented with the Victoria Cross. His citation reads in part: "Major Porteous was detailed to act as Liaison Officer between the two detachments whose task was to assault the heavy coast



***Above:** The VC recipient returned to Dieppe in 1972*

defence guns. In the initial assault Major Porteous… was shot at close range through the hand… Undaunted, Major Porteous closed with his assailant, succeeded in disarming him and killed him… In the meantime the larger detachment was held up, and the officer leading this detachment was killed… Almost immediately afterwards the only other officer of the detachment was also killed. Major Porteous… [took] over the command of this detachment. Rallying them, he led them in a charge which carried the German position at the point of the bayonet, and was severely wounded for the second time… Major Porteous's most gallant conduct, his brilliant leadership and tenacious devotion to a duty which was supplementary to the role originally assigned to him, was an inspiration to the whole detachment."

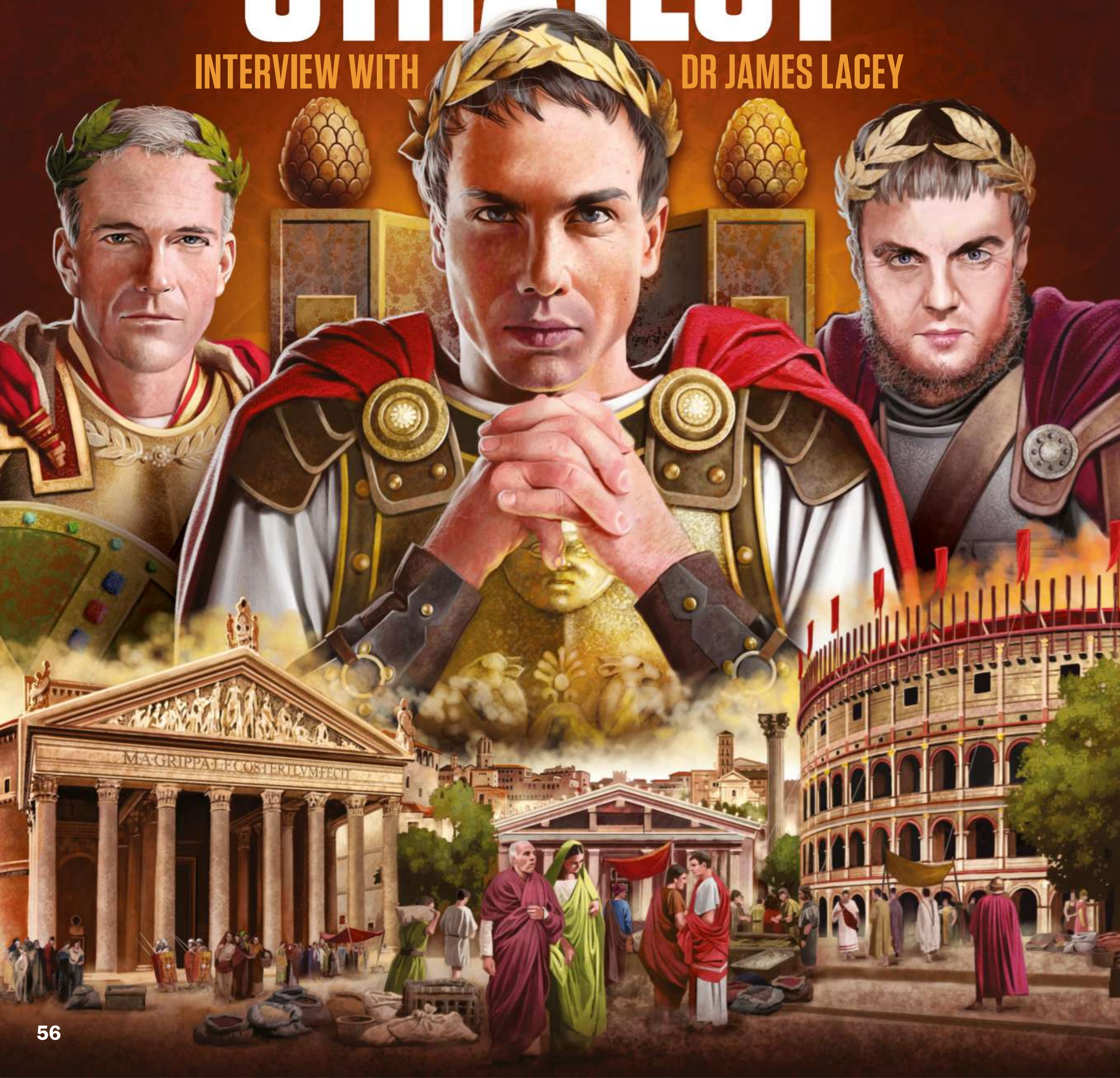
Eventually returning to duty with No. 4 Commando, Porteous took command of D Troop when the unit landed in Normandy on D-Day. His illustrious post-war career saw him excel as an instructor at the Royal Military Academy Sandhurst and in the Junior Leaders Regiment, Royal Artillery. Serving in the likes of Palestine, Germany and Singapore, he retired in 1970 at the rank of colonel. In 1993, he became vice-chairman of the Victoria Cross and George Cross Association, while raising substantial funds for other organisations such as the Commando Association and Army Benevolent Fund. His final honour was sitting in the leading car at the Queen Mother's 100th birthday parade. He passed away a matter of months later, in October 2000, aged 82.

***Below:** Lord Mountbatten, who organised the raid, inspects the Commandos. Their mission – dubbed Operation Cauldron – made up part of Operation Jubilee*

Colonel Porteous, wearing his Victoria Cross, salutes at a parade in 1970

ROME'S GRAND STRATEGY

INTERVIEW WITH DR JAMES LACEY



For decades, academic opinion on the success of the Roman Empire has claimed that its leaders, emperors and dictators did not look to Rome's long-term strategic growth and dominance across the known world, focusing instead on immediate threats and opportunities.

Now Dr James Lacey's book *Rome: Strategy of Empire* is set to cause controversy in university history departments around the world, challenging many well-established theories surrounding the expansion of the Empire's territories and institutions over centuries. Author and historian Edoardo Albert spoke with Dr Lacey about his research and why he thinks the Romans did in fact have a long-term imperial strategy, and executed it so successfully.

The idea of Roman military strategy started with Edward Luttwak's 1976 book The Grand Strategy of the Roman Empire. For readers who haven't read it, could you describe Luttwak's thesis...

Edward Luttwak was a strategist, not a historian. In his book, Luttwak broached a topic that no Roman historian had ever explored before. We have tremendous narratives of Roman history but nobody had ever asked if the Romans actually had an overall strategy. That was the question Luttwak set out to answer and his answer was: "Yes. The Romans had a strategy."

What was the response to Luttwak's book?

It came under attack by a vast swath of the Roman history community. Not all of them joined in, but over the years since the book's publication an academic consensus has developed that Rome was incapable of executing a long-term strategy. Then it gets worse: the current view is that the Romans were incapable of even thinking in strategic terms. I think the criticisms were just taken too far: Luttwak did get a lot of things wrong but his overall thesis is absolutely correct. The Romans did do serious strategic thinking, they did execute a serious long-term strategy, and they maintained it for 500 years.

Like Luttwak, you're not a professional Roman historian. Do you think this will affect the reception of your book?

I'm of two minds on that one. I hope so. I sort of live for those kinds of fights. If they come at me as they did with Luttwak, that just sells books. I'm all happy with that. But I don't think they're going to do it because I spend considerable time upfront saying look, here's my strengths: I've been in the strategy community for a long time, I've been in the military for a long time, I've been in military history for a long time, and I'm putting those things against what great Roman historians have put together for me.

I stand on the shoulders of the great Roman historians, many of them alive today. I accept that they've got the history right; they've done all the grunt work. Where they have failed is in claiming – and it can't be ignored because it's the underlying foundation of much of the debate – that because the Romans did not have maps as we know them they could not do strategy. Luttwak's critics claim that strategy is impossible without maps. I spend a lot of time explaining why this is not true.

ABOUT THE AUTHOR

Dr James Lacey is Course Director and Professor of Strategic Studies and Political Economy at Marine Corps War College. His previous books include *The Washington War: FDR's Inner Circle and the Politics of Power That Won World War II* and *The First Clash: The Miraculous Greek Victory at Marathon and Its Impact on Western Civilization*.

"THE ROMANS DID DO SERIOUS STRATEGIC THINKING, THEY DID EXECUTE A SERIOUS LONG-TERM STRATEGY. AND THEY MAINTAINED IT FOR 500 YEARS"

Map of Roman presence in Cantabria, northern Spain. Dr Lacey claims that the Romans did not require maps in order to plan and execute a long-term strategy for their Empire

© Alamy

WHEN ROME'S PLANS WENT WRONG

Though the Romans dominated the known world for centuries, several catastrophic defeats on the battlefield kept imperial ambitions in check – if only temporarily

CAUDINE FORKS, 321 BCE

As Rome began to take the first steps towards empire and pressed her cause to become the masters of the Italian peninsula, she came into conflict with her neighbours. One of the most powerful of these were the Samnites, located to the south. The Samnite commander, Gaius Pontius, sent a soldier in disguise to tell the Romans that the Samnites were besieging a city (which they were not). The Romans were taken in by this subterfuge and marched to relieve the city.

Their route would take them through a narrow mountain pass (the Caudine Forks) with only a single entrance and exit. When the Romans entered the pass, however, they found the far end barricaded and their retreat now blocked by the Samnite army.

The Samnite commander asked his father for advice and was told that the Samnites could either kill every Roman at their leisure and eliminate them as a threat, or free them (and gain them as a friend and ally). Eventually, as the Roman army starved, the Romans were forced to go 'under the yoke', a sign of abject humiliation and subservience. The Romans would long remember the humiliation and soon renewed the war with the Samnites, eventually conquering them in 290 BCE.

***Above:** A contemporary Lucanian fresco records the battle. It was one of Rome's most humiliating defeats*

CARRHAE, 9 JUNE 53 BCE

The development of Rome's empire meant individual commanders competed to add to it. While Julius Caesar was subjugating Gaul, Crassus (the wealthiest man in Rome) decided that he would add Parthia to compete with Caesar and gain glory for himself. He marched an army of seven legions (some 50,000 men) into the Parthian Empire in 53 BCE. Crassus' army was mostly infantry but that of the Parthians consisted mostly of cavalry, both horse archers and heavily armoured cataphracts. Crassus ignored advice to avoid the desert and marched directly towards the Parthian cities.

The Parthian king, Orodes II, sent out his general, Surena, with an all-cavalry force which probably numbered only 10,000 men. Betrayed by his guide into attacking the Parthians, Crassus marched into the driest part of the desert towards the town of Carrhae. There, he encountered Surena's forces and formed his men into a hollow square. Surena was able to ride his horse archers around the quare and pepper it with arrows, then follow up with heavy cavalry charges when the Romans broke ranks to attack. He also used feigned retreats and the famed 'Parthian shot' – an archer turning and firing from a retreating horse. The Romans were forced to surrender, suffering 30,000 casualties and, worse, losing several legionary standards.

"THE ROMANS WERE FORCED TO SURRENDER, SUFFERING 30,000 CASUALTIES AND, WORSE, LOSING SEVERAL LEGIONARY STANDARDS"

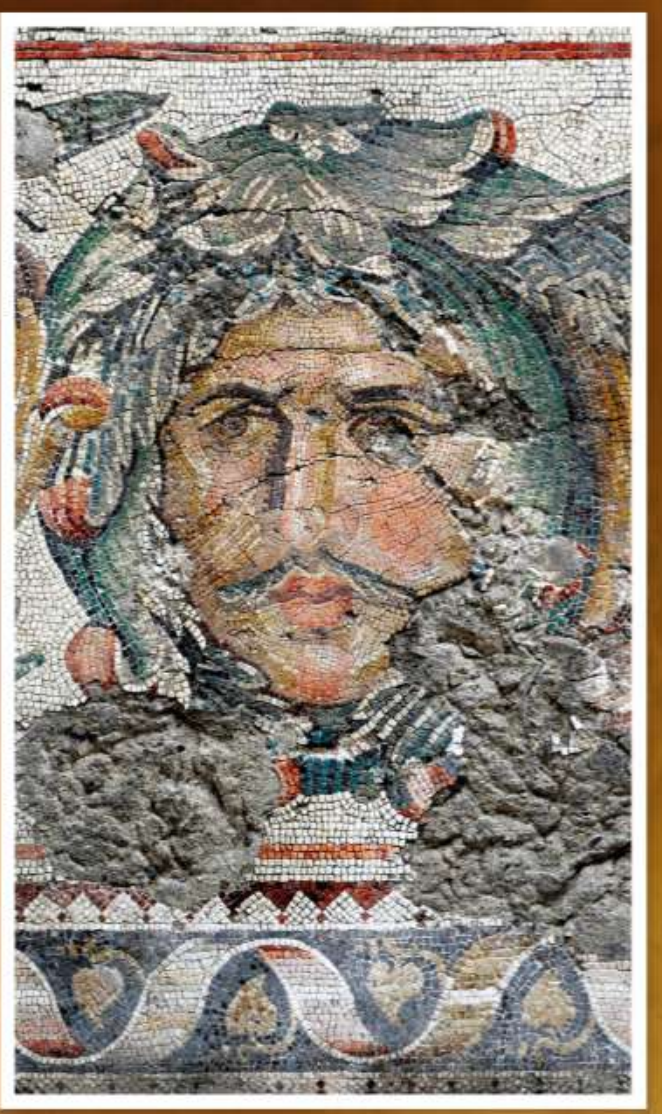
***Below:** Crassus was unable to deal with the combination of horse archers and heavily armoured cataphracts*

ADRIANOPLE, 9 AUGUST 378 CE

In 376 CE a number of Gothic tribes gathered on the far bank of the Danube and asked for admission to the Roman Empire. Rome had by that point been split into two empires, an east and a west, and the Goths were seen as a potential bulwark against the marauding and warlike Huns (who had forced the Goths westwards). Allowed into the Empire, the Goths were immediately maltreated by Roman officers and officials and broke into revolt.

Over the next two years they defeated several armies and the Eastern Roman emperor himself, Valens, was forced to muster an army and deal with the threat. The Goths were led by an able strategist in Fritigern, who was cunning and wily. Valens was also jealous of his nephew, Gratian, the western emperor who had recently been successful against various German tribes.

Fritigern kept his actual numbers concealed and therefore lured an over-eager Valens to face him alone. Ill-prepared, Valens marched his army against the Gothic wagon-laager where his troops began to skirmish before they were fully deployed. The Gothic cavalry charged unexpectedly, forcing the Roman cavalry from the field. They then surrounded the Roman infantry and overwhelmed them with missiles. The losses were as great as those at the Battle of Cannae.



***Above:** Few images of the Goths exist but this mosaic from Istanbul (formerly Constantinople) shows their typical appearance*

This is a major part of your thesis, that Roman historians say strategy is impossible without maps. Why do you think this is wrong?
It's true that the Romans didn't have maps as we understand them, but what they did have was itineraries. An itinerary is literally a collection of dots and a lot of them have drawings but they have little relationship to the actual geography. An itinerary told a Roman general how long it would take to march from one spot to the next spot, and then to the next spot. So if you want to go from Rome to the Rhine River, you're going to have an itinerary that lists each town or major city along the way with a number next to it, say Ravenna 12 days from Rome. I have been in many strategic planning discussions over the course of my life and what I know from these is that maps don't matter. For example, if there's trouble somewhere in the world the first thing the president of the United States is going to ask is: "Where's the nearest carrier?" The next question is: "How long is it going to take the carrier to get to the trouble?"

Strategy is planned by nodes. Nobody cares about the underlying geography. Maps only become important at the point of contact where you're actually putting units into battle formation. And the Romans had those maps: they would send out scouts and get drawings of the immediate terrain and geography. So as far as the emperor was concerned, geography was irrelevant. Let's say trouble breaks out in the upper Danube. He decides to send three legions from the Rhine to help out. All he needs to know is how many days' march it's going to be before legions get there. All the legionary commanders have to know is where they're going to stop along the way, and that's all listed on the itineraries. Messages would then go out to the provincial governors to have food waiting at these locations, and then the legions march. The last thing they need is a 1:50,000 map marking everything along the path. All they need is that itinerary. So not having the instruments needed to plan and execute strategy, the itinerary is absolutely the perfect instrument to plan and execute strategy, and it is still how we do it in the 21st century.

You write about the importance of logistics for Roman strategy. We all know about Roman roads but you argue for the importance of the Mediterranean and the river systems, the Danube and the Rhine. Could you describe their role in the Roman military machine?
The Roman central reserve is actually the troops on the frontier. Until 406, the barbarians never had the communications to make a coordinated attack. They always broke through in one or two spots, usually geographically close to each other. If the Danube is under attack, the Rhine legions can get in boats, move down the Rhine, make a quick jump over land to the Danube and then get to the trouble spot. Plus, all the logistics can move along the river. You don't have to carry it by mule. If they had to rely on animal transport there comes a point where everything the mule is carrying is fodder for the mule. The rivers make it very easy to logistically sustain legions along the frontier, provide a natural barrier and allow for easy transport to threatened regions.

"CIVIL WARS BROKE THE EMPIRE'S MILITARY, SOCIETAL AND ECONOMIC FOUNDATIONS"

For the Mediterranean, you can move legions along the Rhine and the Danube and then march them across Anatolia. That is not as fast as sailing them across the Mediterranean but embarking all your men in boats risks losing them in a storm. You usually find the legions marching around the Mediterranean while the sea is used to move supplies.

One of the points you make is that the greatest single strategic consideration an emperor had was staying alive! Is that why Roman emperors always prioritised dealing with usurpers over defeating a barbarian invasion?
There are some exceptions, but not many. As a general rule it didn't matter what the other strategic priorities were. If a usurper popped up with legions at his command, the emperor stopped everything else he was doing, stripped the frontiers, stripped everything, to get troops to march immediately upon the usurper: that was where the true danger lay because when a usurper takes over then everybody associated with the previous emperor is dead.

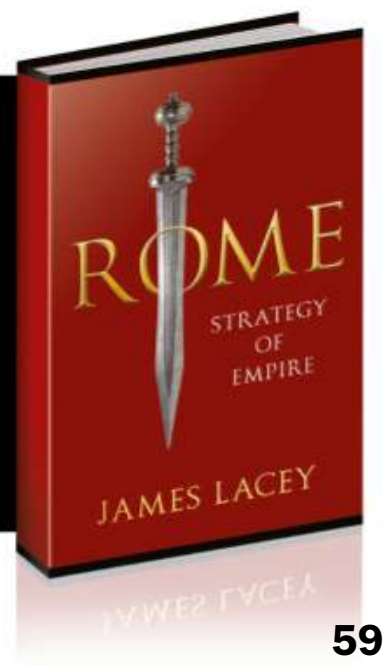
This also explains why the Romans didn't make wholesale adaptations to deal with the barbarian threat in the fourth and fifth centuries. If you adapt to fight fast mobile battles against barbarians popping up everywhere then when a usurper comes at you with powerful legions, your own military, which has been optimised to fight barbarians, is going to get run over and you're going to lose the Empire and your life. If you optimise for one kind of war, you are by definition sub-optimal for any other type of war.

Another point you make in your book is the economic basis of Roman strategy. Could you describe that?
The Mediterranean world was a world of warfare but then, suddenly, there's a Roman Empire and for 200 years there's peace. You could build irrigation that no one's going to destroy, you could expand into marginal lands that suddenly become profitable, you could build a second mill because everything you build is going to last. And everything you build is adding to economic growth. The argument against the economic growth of the Empire during the Principate is that there was no expansion of coinage to match the presumed growth. But what counts is the velocity of money, how fast it is moving from one person to another. That's growth. The Empire became economically stronger and stronger during the 200 years of the Principate. And the number of legions didn't grow – during the Principate the number of legions is kept only slightly above what Augustus had on an economy that's likely two or three times larger. The economic cost to maintain the legions greatly decreases as a percentage of total GDP. As long as the Romans had a strong economic core they were a superpower. Once that was taken away, with the loss of North Africa, the Empire collapsed.

Why did the Western Empire fall?
Civil wars broke the Empire's military, societal and economic foundations – and then the enemy changed. Towards the end of Empire you see large federations of tribal groups all coming across the frontiers at one time: Goths cross the Danube, Alamanni and Franks cross the Rhine. It's a different enemy and Rome no longer has the military power to stop them nor the economic strength to outlast them.

Images © Alamy, Getty

Dr James Lacey's book *Rome: Strategy of Empire* is out now in the USA and will be released in the UK November 2022



M24 CHAFFEE LIGHT TANK

The US Army M24 Chaffee light tank first saw service in WWII with the Allies in December 1944

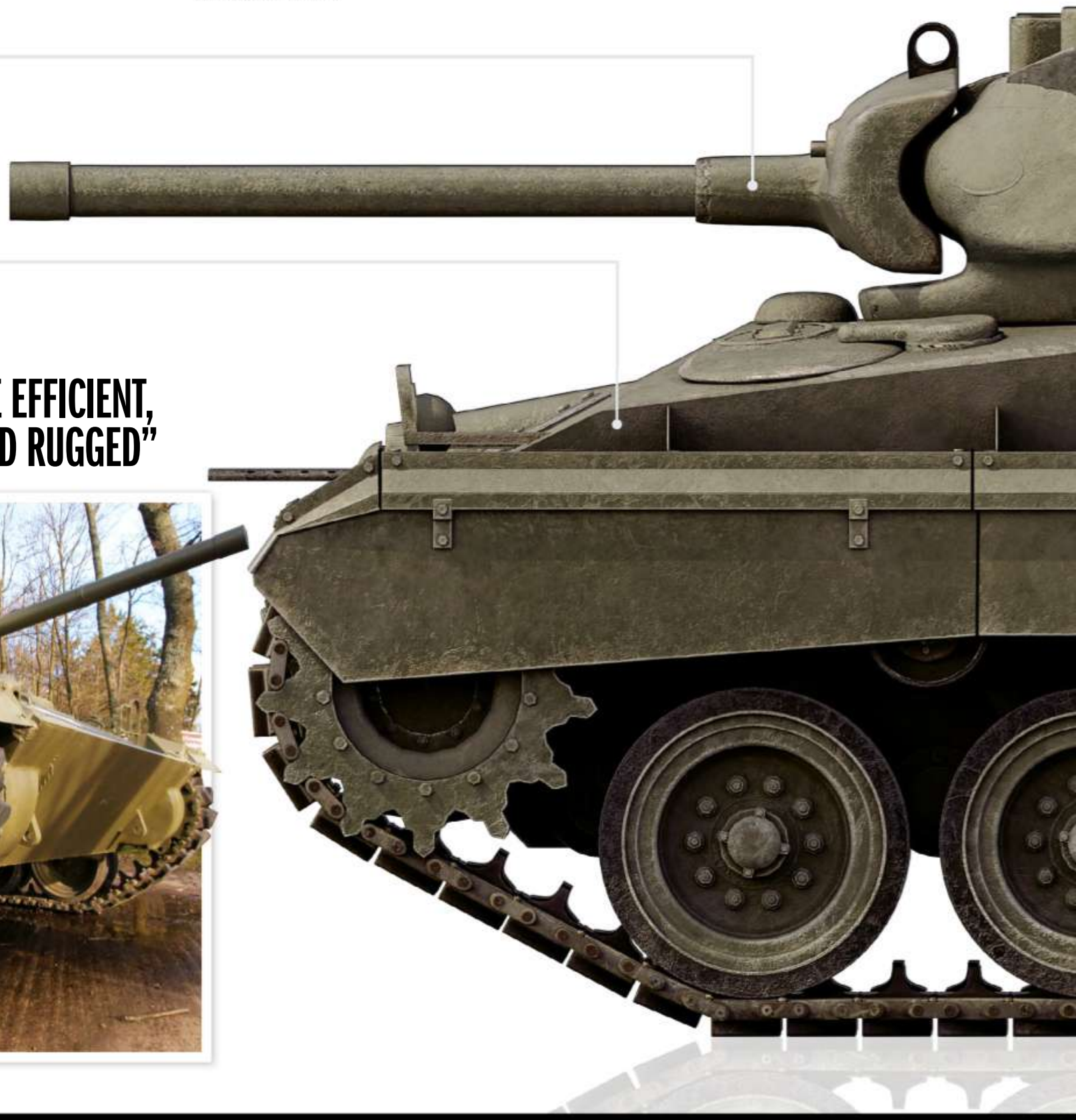
WORDS CRAIG MOORE

SCOUT TANKS

The M24 Chaffee's role was to go ahead of the main attack to scout out the location of enemy units, report their location, call down an artillery barrage or air attack and leave without engaging heavily armed enemy tanks.

BRITISH CHAFFEE TANKS

The British Army ordered 842 M24 Chaffee tanks but received less than 400. The 7th Armoured Division (The Desert Rats) used them in their reconnaissance squadrons. In June 1945 they still had 28.



"THE TANK WAS FOUND TO BE EFFICIENT, SIMPLE TO USE, RELIABLE AND RUGGED"

The Chaffee was popular with crews thanks to its relatively spacious interior and large hatches

© Alamy

The US Army's M24 Chaffee light tank was the replacement for the M3/M5 Stuart light tanks and was a leap forward in light tank design, greatly improving the concept in all directions.

It had modern torsion bar suspensions, completely revised welded steel armour, improved protection and, more importantly, a much more potent lightweight 75mm (2.95in) main gun. The Stuarts only had 37mm (1.4in) guns mounted in their turrets. A few Chaffees arrived in Europe just before the Battle of the Bulge started on 16 December 1944. The tank was found to be efficient, simple to use, reliable and rugged.

After the end of the war it saw service with many other armies around the world: it was involved in combat with the French in Indo-China in the 1950s and the US and South Korean armies during the Korean War. They were also operated by Pakistan in the Indo-Pakistani war of 1971. The light tanks were gradually replaced by the M41 Walter Bulldog. M24 Chaffee tanks were employed to represent Sherman tanks in the 1965 Hollywood film *Battle of the Bulge,* while US M47 Patton tanks portrayed German King Tiger tanks.

M24 CHAFFEE LIGHT TANK

PRODUCTION	FROM MARCH 1944
ORIGIN	USA
LENGTH	5.56M (18FT 3IN)
MAX SPEED	56KM/H (35MPH)
RANGE	160 KM (100 MILES)
ENGINE	TWIN CADILLAC, SERIES 44T24 148HP PETROL
CREW	5 MEN (COMMANDER, GUNNER, LOADER, DRIVER, ASSISTANT DRIVER/RADIO OPERATOR)
MAX ARMOUR	38MM
PRIMARY WEAPON	75MM M6 GUN

HATCHES

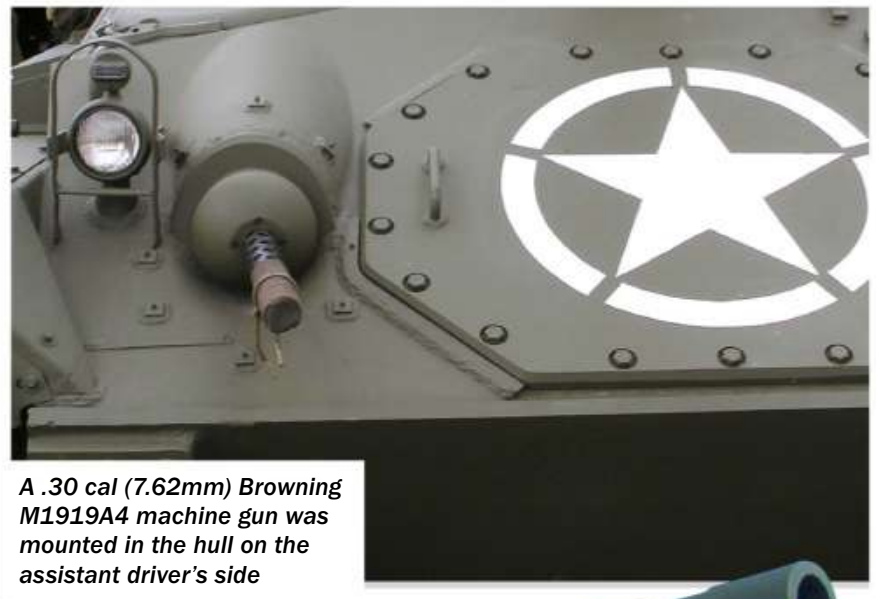
The M24 Chaffee had enlarged driver and assistant driver hatches compared to the Stuart tanks they replaced. Each had a rotating periscope built in. An emergency escape hatch was located in the hull floor behind the assistant driver's seat.

PATTON'S CHAFFEES

In April 1945, Patton's 3rd Army allocated M24 Chaffees to F troop, 2nd Cavalry Reconnaissance Squadron for their advance towards Bavaria, Southern Germany. A blue disk with a white trim and the letter A was painted on their turrets.

Illustration: Nicholas Forder

A .50 cal (12.7mm) Browning M2 HB anti-aircraft machine gun was mounted on top of the turret



A .30 cal (7.62mm) Browning M1919A4 machine gun was mounted in the hull on the assistant driver's side

ARMAMENT

A 75mm (2.95in) M6 gun in an M64 mount and the coaxial .30 cal (7.62mm) Browning M1919A4 machine gun were mounted in the turret. The main gun had an elevation of +15 degrees and could be depressed -10 degrees, with a maximum fire rate of 20 rounds per minute. A second .30 cal Browning M1919A4 machine gun was mounted in the hull on the assistant driver's side, and a .50 cal (12.7mm) Browning M2 HB anti-aircraft machine gun was mounted on top of the turret.

The M24 Chaffee turret was armed with a 75mm M6 gun and a coaxial .30 cal Browning M1919A4 machine gun

***Below:** Two M24s from the 18th Tank Battalion, 8th Armored Division, cross the Rhine during Operation Plunder, March 1945*

© Getty

DESIGN

The hull was a completely welded structure, except for access panels and hatches. It was divided into two compartments: the fighting and driving compartment at the front, and the engine compartment at the rear. These compartments were separated by a bulkhead extending from side to side and from the roof down to the bulkhead extensions, which in turn extended forward far enough to cover the transfer unit. The front of the hull sloped downwards at the top and upwards at the bottom to form a wedge shape.

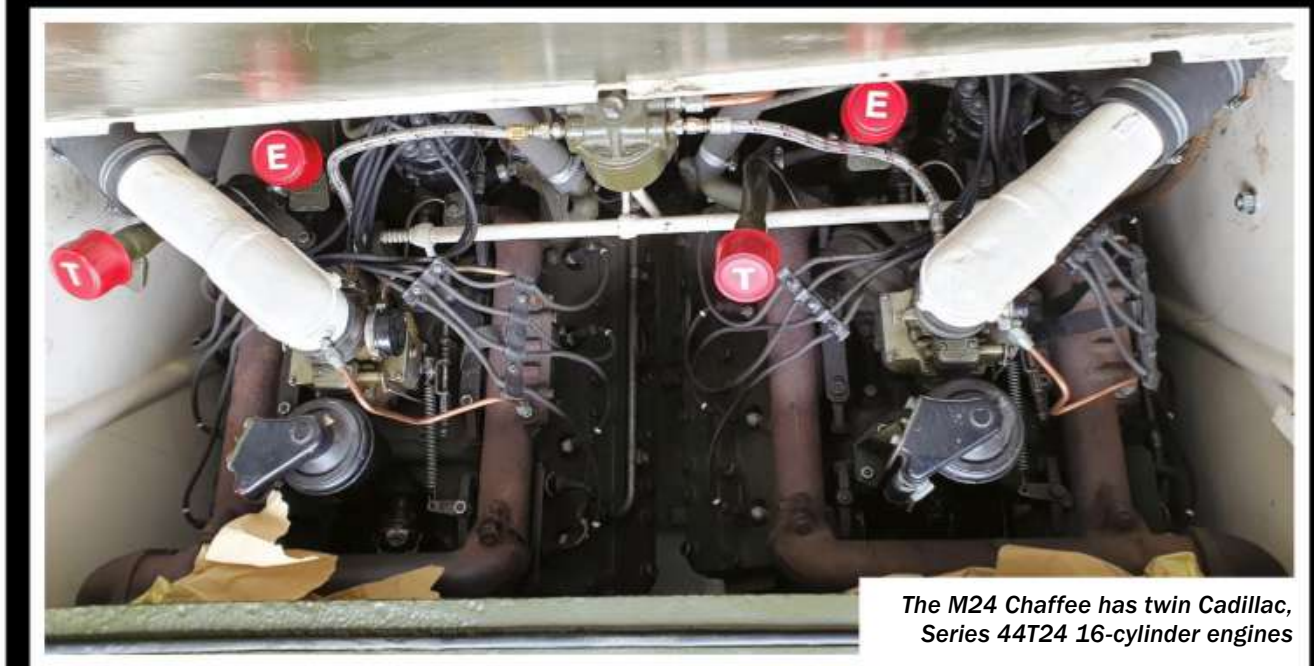
***Below:** The front glacis plate on the M24 Chaffee had a large hatch to enable easy access to the final drive*

***Above:** A snow-camouflaged M24 Chaffee light tank pictured in Belgium, February 1945*

ENGINE

The tank was powered by two eight-cylinder liquid-cooled Cadillac Series 44T24 engines. If there was a fault with one of the engines a crew member could turn it off from inside the tank by operating the disengaging lever on the transfer box. The tank could still operate on one engine, but obviously with less power. The twin Cadillac Series 44T24 engines were fitted with a car silencer underneath the louvred grills, which made the engines very quiet, especially at idle. Unusually, the exhaust pipes pointed up vertically through the armoured louvres.

Above: Unlike many tanks, the M24's engine exhausts point up vertically through armoured louvres



The M24 Chaffee has twin Cadillac, Series 44T24 16-cylinder engines

All images © Craig Moore unless otherwise stated

CREW COMPARTMENT

The fighting compartment occupied the middle of the hull. The driver sat on the left of the vehicle at the front and the co-driver was to his right. The driver steered the tank using two large tillers, and the co-driver also had two tillers so he could take over driving if necessary. He operated the bow machine gun. The gunner sat on the left of the turret and the loader stood up on the right side of the main gun and serviced the coaxial machine gun. The commander sat behind them.

***Right:** The M24 Chaffee driver's position was on the left side. He used two tillers to drive*

***Left:** The gunner sat on the left side of the 75mm gun breach inside the turret. The loader's position was on the right side of the gun*

An M24 from the US 81st Cavalry Reconnaissance Squadron, 1st Armored Division, near Bologna in April 1945

© Getty

SERVICE HISTORY

M24 Chaffee tanks were popular with the tank crews as they were a lot more comfortable, roomier and had larger hatches than the Stuarts. As more M24s arrived in Europe they were issued to reconnaissance units and served alongside Stuart light tanks until the war ended. They looked very different to Sherman and Stuart tanks and not all Allied units had been briefed as to what they looked like. This led to several reported occasions where they were stalked by bazooka teams from the US 82nd Airborne Division and 30th Infantry Division who misidentified them as German tanks.

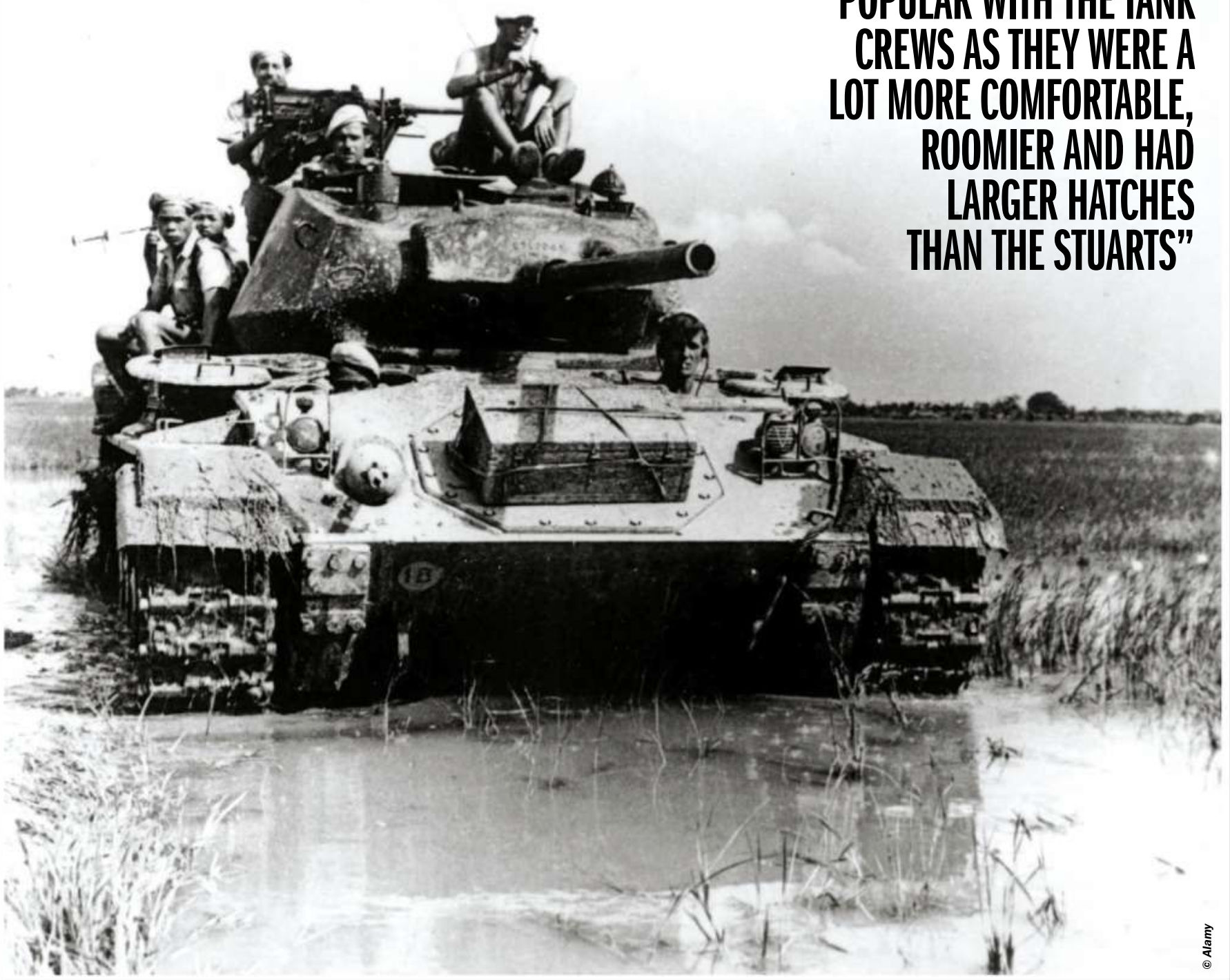
After WWII the Chaffee quickly replaced all Stuarts in US Army service. For occupation duties in Europe and Japan, they were considered better vehicles than the heavier tanks because they caused far less damage to roads and light bridges. When North Korea invaded the South in June 1950, Chaffee tanks were rushed to Korea from Japan.

***Above:** French army M24 Chaffee light tanks took part in the French Indochina (Vietnam) campaign and also in Algeria*

***Right:** After WWII, M24 Chaffee tanks were used in Germany and Japan. They were rushed to Korea when war broke out*

The M24 Chaffee was regarded as a leap forward in light tank design

"M24 CHAFFEE TANKS WERE POPULAR WITH THE TANK CREWS AS THEY WERE A LOT MORE COMFORTABLE, ROOMIER AND HAD LARGER HATCHES THAN THE STUARTS"



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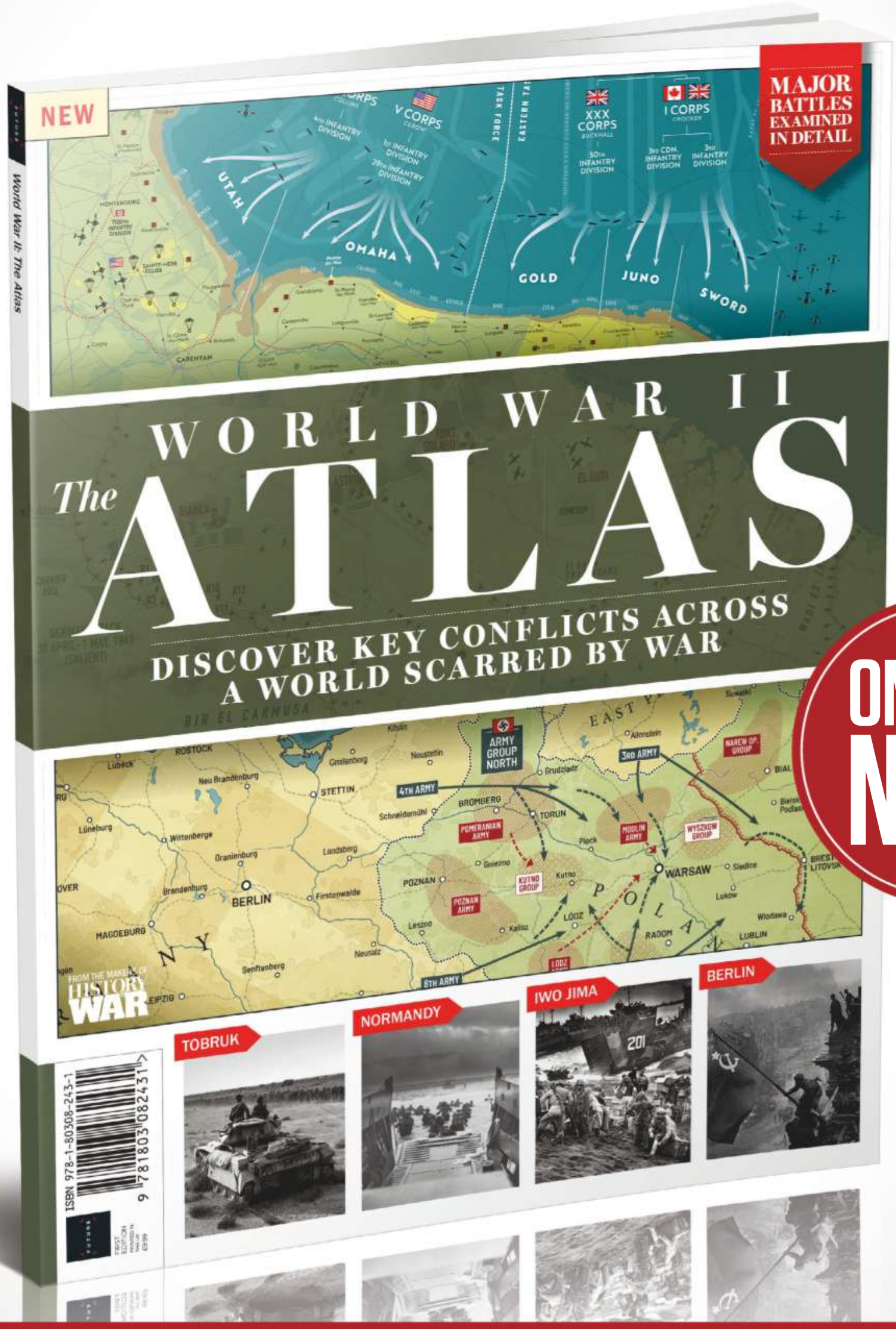
REWIND THE CLOCK AND EXPLORE A WORLD AT WAR

In this special edition bookazine from the makers of *History Of War*, explore the defining battles of the Second World War in detail, discover how pivotal leaders led their armies into fierce conflicts and much more



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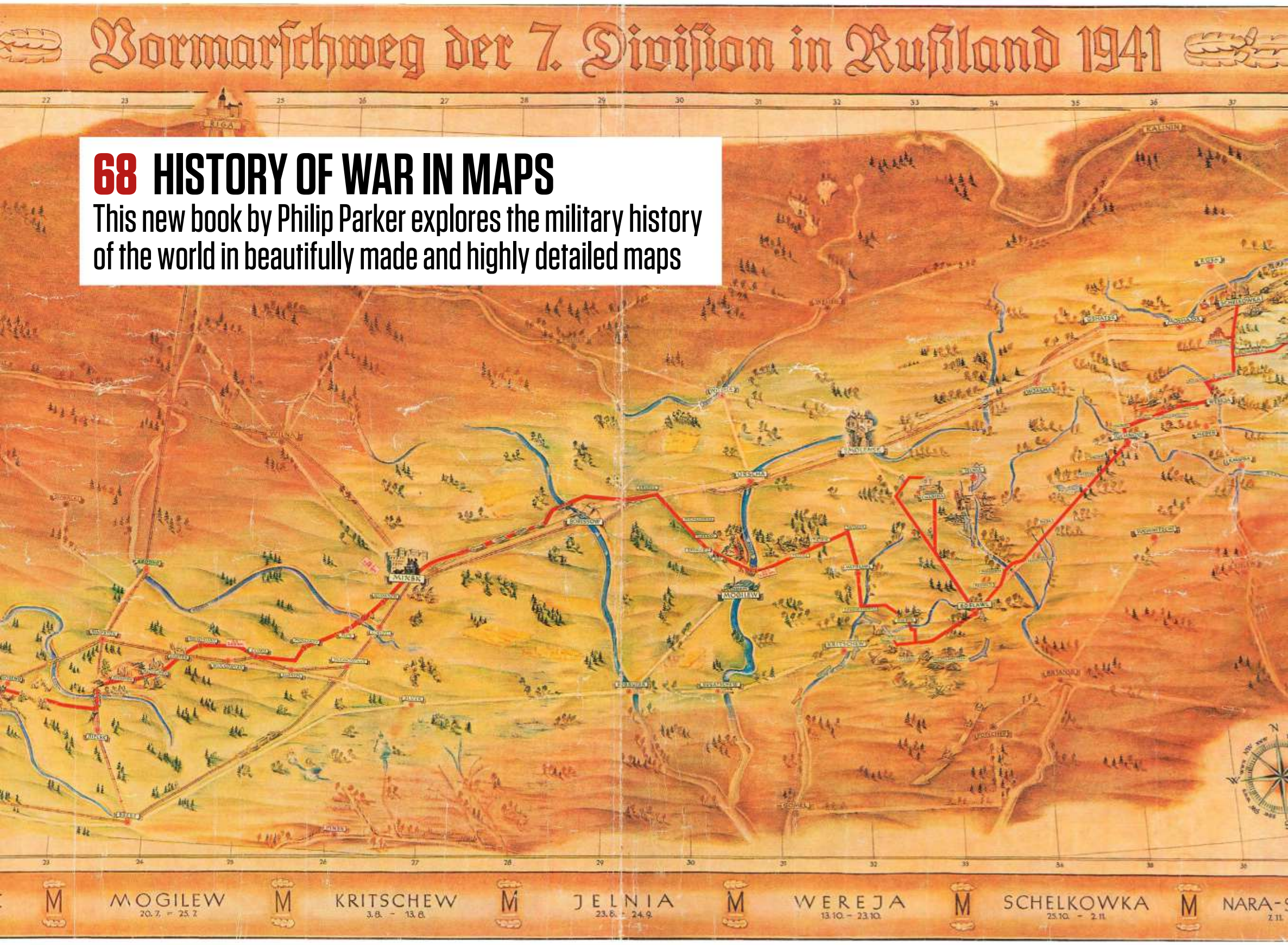

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HISTORY OF WAR IN MAPS

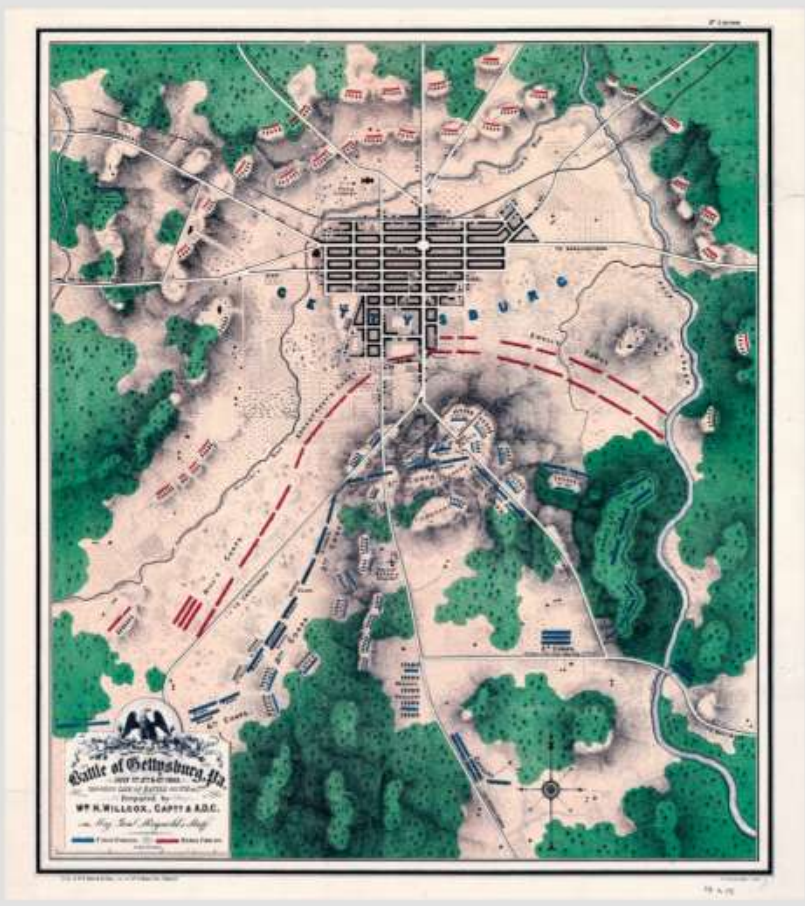
This new book by Philip Parker explores the history of conflict through military maps that have been used to direct campaigns and record key battles across the centuries

Maps have been an inseparable part of warfare for centuries, directing grand campaigns that have reshaped the ancient world and revealing some of the most brilliant battlefield tactics from military geniuses. *History of War in Maps* is a new book by Philip Parker that explores over 70 historical maps, each of which tells its own story of war, from the Battle of Marathon (490 BCE) to the Battle of Crécy (1346), right up to modern campaigns such as Operation Desert Storm (1991). Philip also reveals how the maps themselves have been the cause of fights over borders and used to project control across the world. Here is a small selection of some of the stunning examples that are expertly curated inside *History of War in Maps*. *History of War in Maps* is published by Collins and is on sale 15 September 2022.

Philip Parker is an historian and *Sunday Times* bestselling author with *The Northmen's Fury*. He studied at Cambridge and Johns Hopkins University and has written widely on late antiquity, the early Middle Ages and world history. His unique panoramic history of the nation, *History of Britain in Maps*, was published by Collins, and he has also written *History of World Trade in Maps* and *The A-Z History of London*.

THE FALL OF CONSTANTINOPLE

The city of Constantinople, capital of the Byzantine or Eastern Roman Empire, was captured by the army of Sultan Mehmed II in 1453. This heavily stylised representation of the city, painted in 1537 by the Romanian artist Toma of Suceava for the monastery of Moldovita, lays great stress on the city's fortifications. It was these walls that were thought to be impenetrable, but were breached by the Sultan's grand cannons and bombards.



SIEGE OF JERUSALEM

The capture of Jerusalem was the primary object of the First Crusade, launched in 1096. This map, found in a late 12th-century book of psalms, is a stylised image of Jerusalem and its status as a Holy City for Christendom is underlined by the sacred sites it shows, such as the Holy Sepulchre, topped by a cross and enclosing the sarcophagus said to have contained the body of Christ.

BATTLE OF GETTYSBURG

Considered the turning point of the American Civil War, the clash between Robert E Lee and George G Meade's forces lasted for three long and bloody days. What began as a chance encounter in a nearby town escalated into a decisive pitched battle as Confederate forces attempted to storm the Union positions. This map, by Captain William H Wilcox, shows the positions of the Union (in red) and Confederate (in blue) armies at Gettysburg on 2 July 1863, at the mid-point in the encounter. Wilcox had joined up as a topographical engineer early in the war but resigned from military service just three months after Gettysburg.

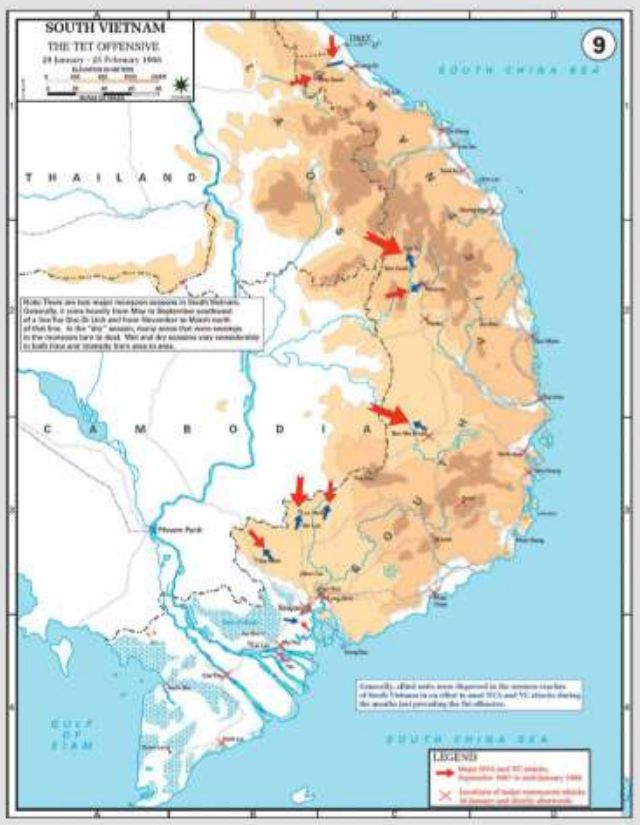
Images © Alamy, Wiki PD Gov

OPERATION BARBAROSSA

This map shows the monthly progress of the German 7th Panzer Division – marked by a red line snaking through the western Soviet Union – during Hitler's invasion of the USSR.

THE TET OFFENSIVE

This map, compiled by the United States Military Academy at West Point, New York State, represents the 1968 North Vietnamese attacks launched in over 100 urban centres during the Vietnam War.

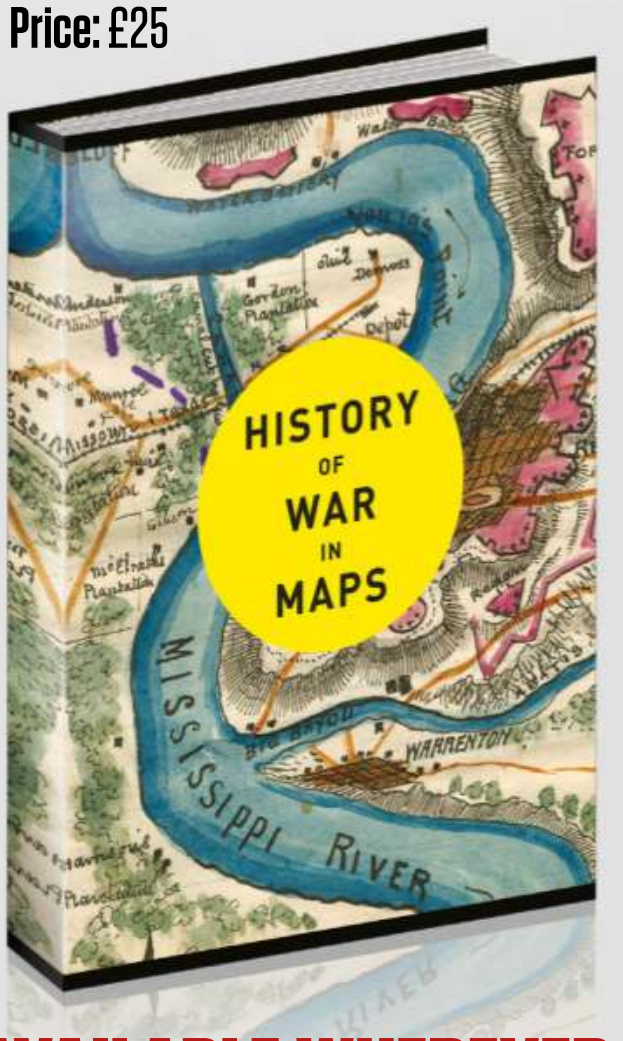


BATTLE OF IWO JIMA

Prepared for the United States Marine Corps in autumn 1944, this map depicts the Japanese defences on the island of Iwo Jima in the Volcano Islands, 1,200km south of Tokyo. Dotted with military installations and dominated by the 169-metre-high bulk of Mount Suribachi, an extinct volcano in the south of the island, Iwo Jima offered a possible staging post for American P-51 Mustang fighters which could provide escort cover to the B-29 bombers that by early 1945 had begun raids on the Japanese home islands.

History of War in Maps

Author: Philip Parker
Published by: Collins
Released: 15 September 2022
Price: £25



AVAILABLE WHEREVER BOOKS ARE SOLD

Pauline Gower, who set up the Air Transport Auxiliary women's section

***Right:** First officer Dora Lang was killed on 2 March 1944 while delivering a de Havilland Mosquito Mk VI plane to an airfield in Hampshire*

Ann Wood-Kelly, one of the 24 American women pilots to serve in the Air Transport Auxiliary

***Left:** Flight Officer Hilda Rimington, who served in both world wars, photographed during her service with the WRAF in World War I*

WOMEN & WAR

A new exhibition at Biggin Hill Memorial Museum commemorates women's contribution to the RAF and the defence of the United Kingdom during the darkest hours of World War II

That the heroic role of women during the Second World War should be commemorated in a new exhibition at the Biggin Hill Memorial Museum seems particularly appropriate.

Most famous for its role as one of the key fighter stations during the Battle of Britain, RAF Biggin Hill also saw the award of three Military Medals to WAAFs who were stationed there during the battle. Elizabeth 'Joan' Mortimer, Elspeth Henderson and Helen Turner were all recognised for their brave actions for staying at their posts during the Luftwaffe attack on the airfield on 30 August 1940 which killed 39 people.

However, the new exhibition is as much about the unsung female heroes of wartime as it is about those who were formally recognised for their bravery.

Constructed around the old St George's Chapel (originally the station church and a memorial to those who lost their lives flying from the airfield) the museum opened in 2015 and focusses on the human experience of war and of life during wartime at and around what is arguably the most famous fighter station in the world. With its immersive and interactive displays, that story is told through a remarkable collection of exhibits and artefacts tracing the station's fascinating story through war and peace. Now, that story has been enhanced by the new exhibition Women & War: Hidden Heroes of World War II.

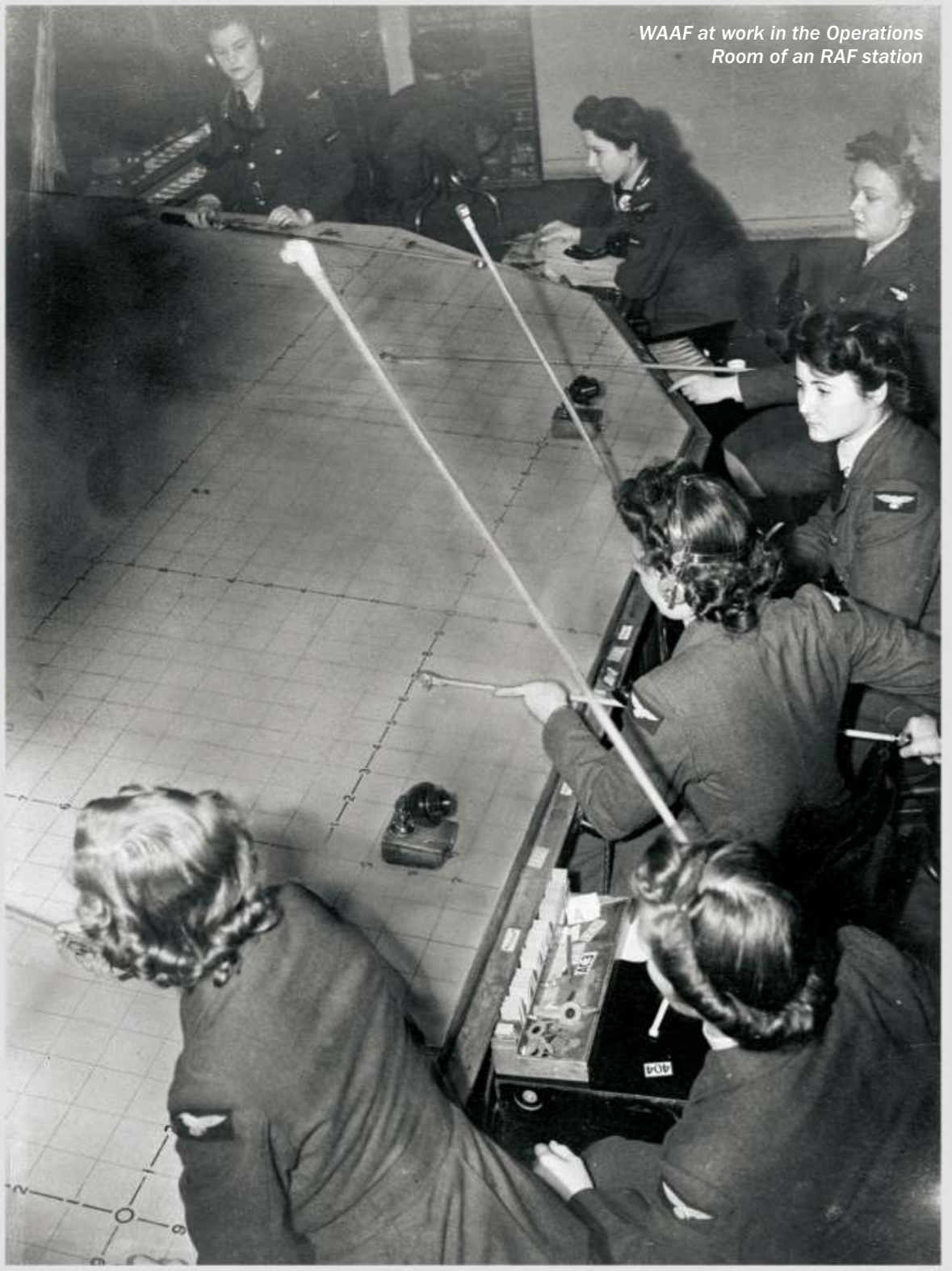
One of the special features of the exhibition is a focus on the astonishing work and bravery of the female pilots of the Air Transport Auxiliary (ATA), with 168 of these remarkable women delivering fighters, bombers and training aircraft to airfields up and down the country during the Second World War. One of these female pilots was the late Jackie Moggridge, and now her smart ATA uniform and flying logbooks (which record no less than 1,438 delivery flights of 89 different aircraft types) are central to the Biggin Hill exhibition.

These precious artefacts are on loan from her daughter, Candy Adkins, who tells *History of War*: "I think it is wonderful that the work of women like my late mother are being remembered in this way, and although she would not have thought of herself as in any way 'heroic', I know that she would have been proud and touched to have been included in what is a wonderful recognition of the role of women in wartime."

Of their number, 15 women ATA pilots were to lose their lives in flying accidents, mostly falling victim to bad weather. But to those women who served on the ground, the danger of death or injury was never far away either. And this was especially the case at a front-line station like Biggin Hill.

Ninety-nine-year-old WAAF veteran Ann Galley (nee Dale) was one of those who served at Biggin Hill as an operations room plotter in 1940. Ann attended the opening preview of the exhibition where the story of the crucial role that she and her colleagues played during the Battle of Britain is told and highlights the dangers the women faced.

After the operations room was hit in the attack which resulted in the award of the Military Medals to WAAFs Mortimer,



WAAF at work in the Operations Room of an RAF station

Henderson and Turner, the vital hub was relocated to the ballroom in Towerfields, a house in nearby Keston. Here, Ann stood at the situation map for day-long shifts plotting incoming raids and the fighters intercepting them.

Speaking with *History of War*, Ann said that she felt honoured to be remembered in the exhibition and that she hoped it would help people to connect with the past and to understand what women like her had achieved. She added that she felt immensely proud to have done her patriotic duty as one of the women who faced down Luftwaffe attacks to keep the station operational, and recalled that following attacks on Biggin Hill the WAAFs were told not to walk around the camp in groups. That way, casualties were likely to be minimised during any German attack.

Although that instruction was a chilling reminder of the dangers faced by the women every day, it was the camaraderie and lighter moments of the often fraught wartime life at Biggin Hill that Ann preferred to remember: “One day, we had a visit from General Eisenhower. It was during the time we had the American ‘Eagle Squadron’ based with us. He brought along boxes of oranges for us WAAFs, and they were such a rare treat. It was a lovely and memorable gesture. It sounds like such a simple thing now, but it was nice to be recognised for the importance of our work by somebody like Eisenhower.”

The recognition by General Eisenhower of the role played by women in winning the war is a recognition that continues through the exhibition at Biggin Hill Memorial Museum, and it celebrates not only the bravery of those women but also how they helped to change attitudes towards gender equality in ways that continue to this day.

Nowadays the participation of women in front-line warfare is commonplace, but in the dark days of the Second World War these brave women were pioneering trailblazers. Of their commemoration, Biggin Hill Memorial Museum director Kate Edwards says: “We hope people will visit us to delve into these new stories and enjoy that experience while engaging with all the displays to discover these hidden female heroes of the Second World War.”

The museum is open Tuesday to Sunday, (closed Mondays), 10am to 5pm, and is to be found on Main Road, Biggin Hill, Kent, TN16 3EJ. Admission (including entrance to the new exhibition) is £6.50 for adults, with concessions available.

The Biggin Hill Memorial Museum is supported by the National Lottery Heritage Fund and the London Borough of Bromley

Further information is available by going to: www.bhmm.org.uk

The exhibition, Women & War: Hidden Heroes of WWII, runs until late spring 2023

Images © Biggin Hill Memorial Museum, IWM, Smithsonian National Air & Space Museum

MUSEUMS & EVENTS

Discover County Antrim's formidable castle, the tumultuous history of Ukraine and Norfolk's tribute to an iconic comedy series

A statue of actor Arthur Lowe dressed as his most famous character Captain Mainwaring sits outside the museum

Corporal Jones' van became so famous that various toy versions of it became commercially available, including a die-cast 1:50 model produced by Corgi Classics

Thetford Guildhall's current building was completed in 1901, although its history dates back to the 14th century

"Don't panic!"

The Dad's Army Museum in Thetford celebrates the much-loved BBC TV series with collections of memorabilia and wartime-themed displays

Running for nine series and 80 episodes from 1968-77, *Dad's Army* is one of the most successful British television sitcoms. Produced by the BBC, it regularly gained audiences of 18 million and is still shown internationally today. Co-written by Jimmy Perry and David Croft, the show was based on Perry's experiences of serving in the Home Guard as a teenager during WWII.

Partially basing the youthful Private Pike on himself, the character Lance Corporal Jones was inspired by an elderly NCO Perry had known in the 10th Hertfordshire Home Guard Battalion. Perry and Croft also created memorable (and mostly elderly) characters such as Captain Mainwaring and Sergeant Wilson, the hapless duo tasked with defending the fictional coastal town of Walmington-on-Sea.

Such was the popularity of *Dad's Army* that it has inspired two feature films, a stage show and a radio series. External scenes were filmed in and around the Norfolk town of Thetford and it is now home to the Dad's Army Museum. The museum combines its comedic exhibits while paying tribute to the real Thetford Home Guard who served during the war.

Based in the Grade II-listed Guildhall, the museum opened in 2007 and is run by dedicated volunteers. The Guildhall itself featured in two episodes of the series and now houses a reconstruction of Captain Mainwaring's church hall office. There are also several display areas that contain memorabilia and items connected with the series. This includes costume uniforms worn by the actors, props, period artefacts dating from the 1940s and unique photographs donated by the Dads' Army Appreciation Society.

In December 2012 the museum also bought the original 1935 two-ton Ford BB that was used as Corporal Jones' butcher's van in the series for £63,100. The van was the most recognisable vehicle from the show but it was too big to be held in the Dad's Army Museum. It is now displayed in the nearby Charles Burrell Museum, which is dedicated to steam power and steam transport. It regularly participates in special events for the Dad's Army Museum

The museum also contains a shop and the 1940s-themed Marigold Tea Room, which serves homemade cakes made from wartime recipes. It has proven to be a popular attraction, with over 100,000 visitors, as well as winning a tourism award in 2022. Various guided tours are also provided, including walking tours around Thetford town centre and coach tours for rural filming locations.

Regular events are held at the museum including wartime-themed singing concerts, fairs and Vintage Days.

For more information, news & events visit: www.dadsarmythetford.org.uk

Defending Ulster

Carrickfergus Castle is an almost pristine example of how medieval strategic warfare was conducted in what is now Northern Ireland

Originally built by the Anglo-Norman knight John de Courcy in 1177, Carrickfergus Castle is one of the best-preserved medieval structures in Northern Ireland. Situated in the town of Carrickfergus on the northern shore of Belfast Lough in County Antrim, the castle was strategically important in Ulster for centuries. It was besieged many times by English, Scottish, native Irish and French armies, and was also the place where King William III landed in Ireland in 1690.

Briefly captured by the French in 1760 and even the scene of a naval duel during the American Revolutionary War, the castle was garrisoned during WWI and served as an air raid shelter during WWII. It is now maintained by the Northern Ireland Environment Agency as a historic monument.

Now open to the public, Carrickfergus' medieval banqueting hall has been fully restored and there are many exhibits to show what life was like in Ulster during the Middle Ages. There are also displays of cannons that range in age from the 17th-19th centuries. There is a self-guided tour of the walls provided upon entry, and guided tours are also occasionally arranged by the Carrickfergus Historical Society.

For more information visit:
discovernorthernireland.com/carrickfergus-castle

***Left:** The castle was besieged by King John of England in the early 13th century and Prince William, Duke of Cambridge's current titles also include the barony of Carrickfergus*

***Below:** The interior of the restored medieval banqueting hall*

Understanding Ukraine

The National Army Museum will be hosting a lecture by journalist and author Anna Reid about the complex history of the Eastern European country

Threatened by Moscow and long misunderstood in the West, Ukraine has become the focus of international attention since it was invaded by Russia in February 2022. On 17 September, a timely talk will be given by journalist and author Anna Reid at the National Army Museum in London.

A former Kyiv correspondent for *The Economist* and *The Daily Telegraph*, Reid is currently preparing a fourth edition of her 1997 book *Borderland: A Journey Through the History of Ukraine*. Speaking as part of the Chelsea History Festival, Reid will draw on her long-standing knowledge of Ukraine to shed light on the history of a country that was once the centre of the first great Slav civilisation in the Middle Ages.

Divided between warring neighbours for a millennium, Ukraine won independence with the collapse of the Soviet Union. Ukrainians have since mounted two revolutions to demand fair elections and closer ties to Europe but its territory has been encroached on by Russia since the annexation of Crimea in 2014. Now, in the midst of war, it is more important than ever to understand the history of this complex borderland.

For more information & to book tickets visit:
chelseahistoryfestival.com/events

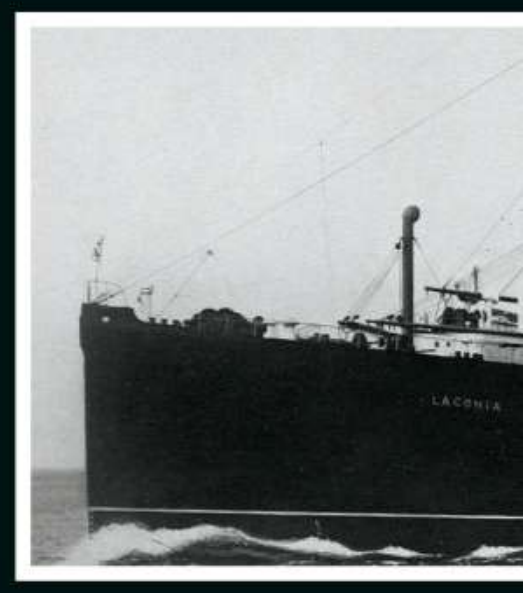
"UKRAINE WON INDEPENDENCE WITH THE COLLAPSE OF THE SOVIET UNION"

Vladimir II Monomakh (1053-1125) was a grand prince of Kievan Rus', a medieval state that the modern nations of Ukraine, Russia and Belarus all claim as their cultural ancestor

All images © Alamy

WWII THIS MONTH...

SEPTEMBER 1942



To commemorate 80 years since the Second World War, **History of War** will be taking a look at some of the key events taking place during each month of the conflict

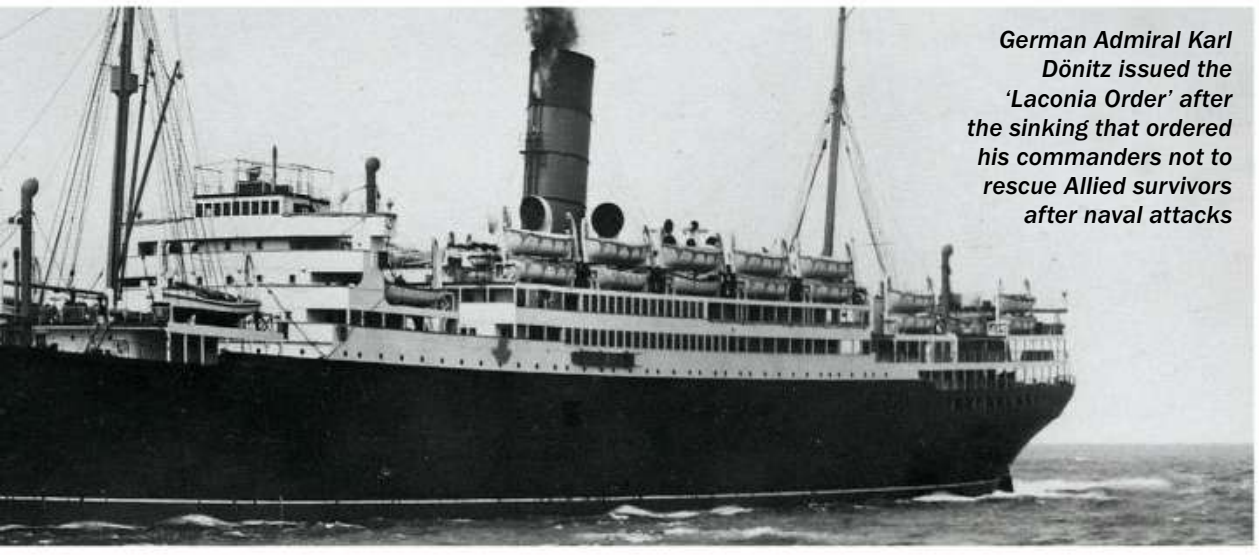
An American soldier examines a crate full of rings confiscated from prisoners in Buchenwald concentration camp. They would have been used to fund the Reichsbank

AUGUST FRANK MEMORANDUM

On 26 September 1942, SS General August Frank issued a memorandum detailing how the Nazis would carry out the Holocaust. Frank operated as part of the SS-WVHA (SS Main Economic and Administrative Office), which administered the concentration camps. His memorandum included instructions on how to take anything of value from murdered Jews and to which Nazi departments they should be sent.

Frank instructed, among other things, that cash should be paid into the Reichsbank and that precious metals, stones and jewellery were to be "delivered" to the SS Main Economic and Administrative Office. Even clothing and bedding was sent to the Administrative Office, while watches and tools were to be sent to German soldiers. Multiple copies of the memorandum were sent to SS camps, including Auschwitz, and it was later used as evidence against Frank during the Nuremberg Trials. He was sentenced to life in prison.

Images © Alamy, Getty, Wiki / PD / Gov



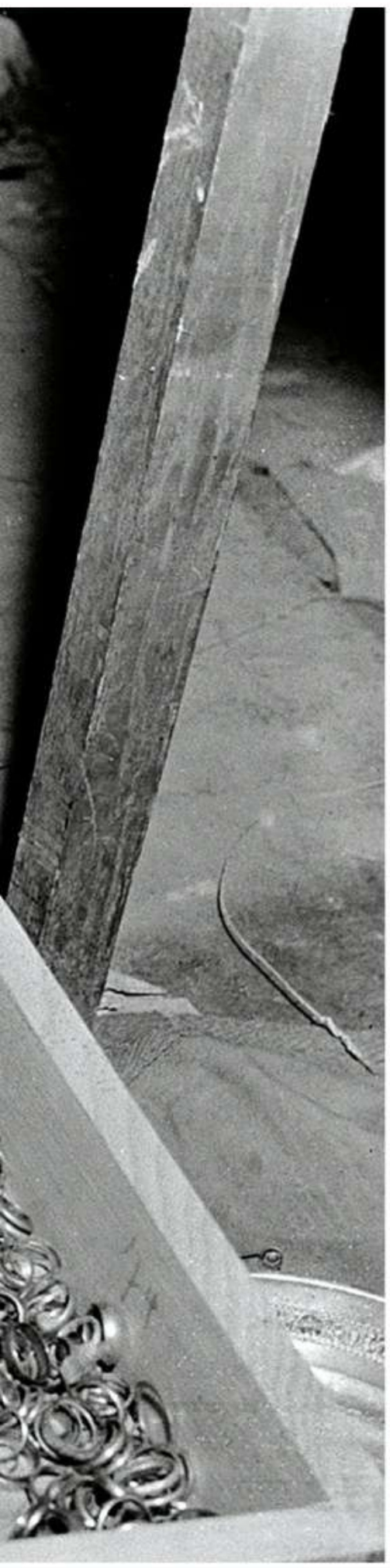
German Admiral Karl Dönitz issued the 'Laconia Order' after the sinking that ordered his commanders not to rescue Allied survivors after naval attacks

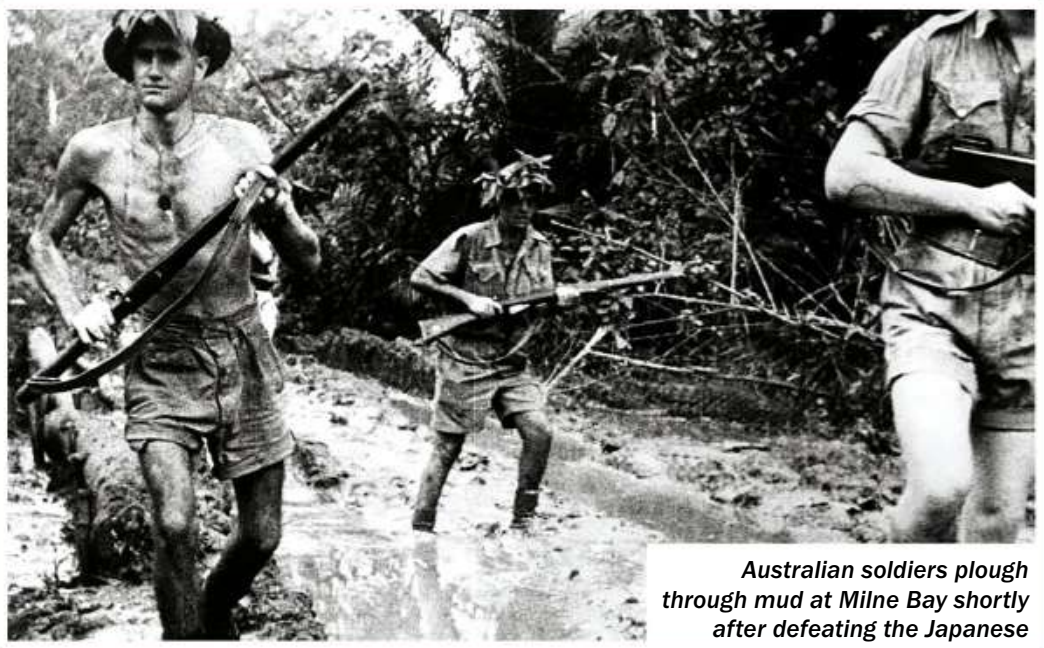
THE LACONIA INCIDENT

RMS Laconia was a Cunard ocean liner that was drafted into war service and converted into an armed merchant cruiser. Serving during the Battle of the Atlantic, Laconia escorted convoys and worked as a troop transport.

On 12 September 1942, it was torpedoed by U-boat U-156 while carrying British personnel, Polish soldiers, civilians and c.1,800 Italian POWs. Laconia sank and while most of the British and Polish personnel survived , only 415 Italians were rescued. When U-156's commander, Werner Hartenstein, heard there were civilians and POWs aboard he surfaced to rescue survivors while asking nearby U-boats for assistance.

Despite flying Red Cross flags, the U-boats were attacked by an American B-24 Liberator aircraft. The submarines were forced to dive, with many survivors being abandoned. It is estimated that c.1,600-1,700 people died during the sinking and rescue attempt.





Australian soldiers plough through mud at Milne Bay shortly after defeating the Japanese

BATTLE OF MILNE BAY

Fought in southeast Papua New Guinea, the Battle of Milne Bay saw c.2,000 Japanese marines attack Allied airfields. The Japanese believed that these airfields would be poorly defended but the Allies were forewarned about the attack by British military intelligence and heavily reinforced Milne Bay with Australian and American troops.

Most of the Allied troops were Australian and it was they who primarily took on the Japanese in heavy fighting. Supported by Royal Australian Air Force aircraft that targeted enemy soldiers and logistics, the Allies forced the Japanese to withdraw after a long battle fought during 25 August – 7 September 1942. Milne Bay is considered the first major battle of the Pacific War where Japanese land forces were comprehensively defeated.

LOOKOUT AIR RAID

The raid on Pearl Harbor in December 1941 was the most infamous attack on American territory during WWII but it was not the only Japanese assault on US soil. On 9 September 1942, a Yokosuka E14Y floatplane launched from the Japanese submarine I-25 west of Cape Blanco, Oregon.

The aircraft was flown by Warrant Officer Nobuo Fujita and Petty Officer Okuda Shoji and carried two incendiary bombs. Their intention was to start a forest fire near Brookings, Oregon, which the Japanese hoped would shock and divert American war resources. Fujita released the bomb but it only caused a small crater and forest lookouts quickly put out the relatively small fire. Nevertheless, it was the first time that the contiguous (mainland) United States was bombed by an enemy aircraft.

Nobuo Fujita visited Brookings in 1962 where he donated his family katana sword as a symbol of friendship. He was later made an honorary citizen of the city in 1997

Yitzhak Rochzyn was shot after killing a German soldier with an axe to the head. He had previously told the Nazis: "Either we all live, or we all die."

ŁACHWA GHETTO UPRISING

When the Nazis invaded the Soviet Union they began forcibly moving local Jews into ghettos. One these was established in the Belarussian town of Łachwa, where c.2,350 Jews were forced to live in a tiny ghetto consisting of two streets and 45 houses.

By August 1942, Łachwa's Jews heard of liquidations occurring in nearby ghettos. On 2 September a Nazi killing squad surrounded the ghetto while falsely offering to "resettle" the Jews elsewhere. Yitzhak Rochzyn, the leader of the ghetto underground resistance, refused the offer and resistance members began burning buildings on 3 September.

Nazis were attacked when they entered the ghetto with over 1,000 Jews being killed, including Rochzyn. Approximately 1,000 more Jews escaped Łachwa, although most were captured and killed. However, 90 ghetto residents survived the war. It is believed that the fighting at Łachwa was the first ghetto uprising during the Holocaust.

REVIEWS

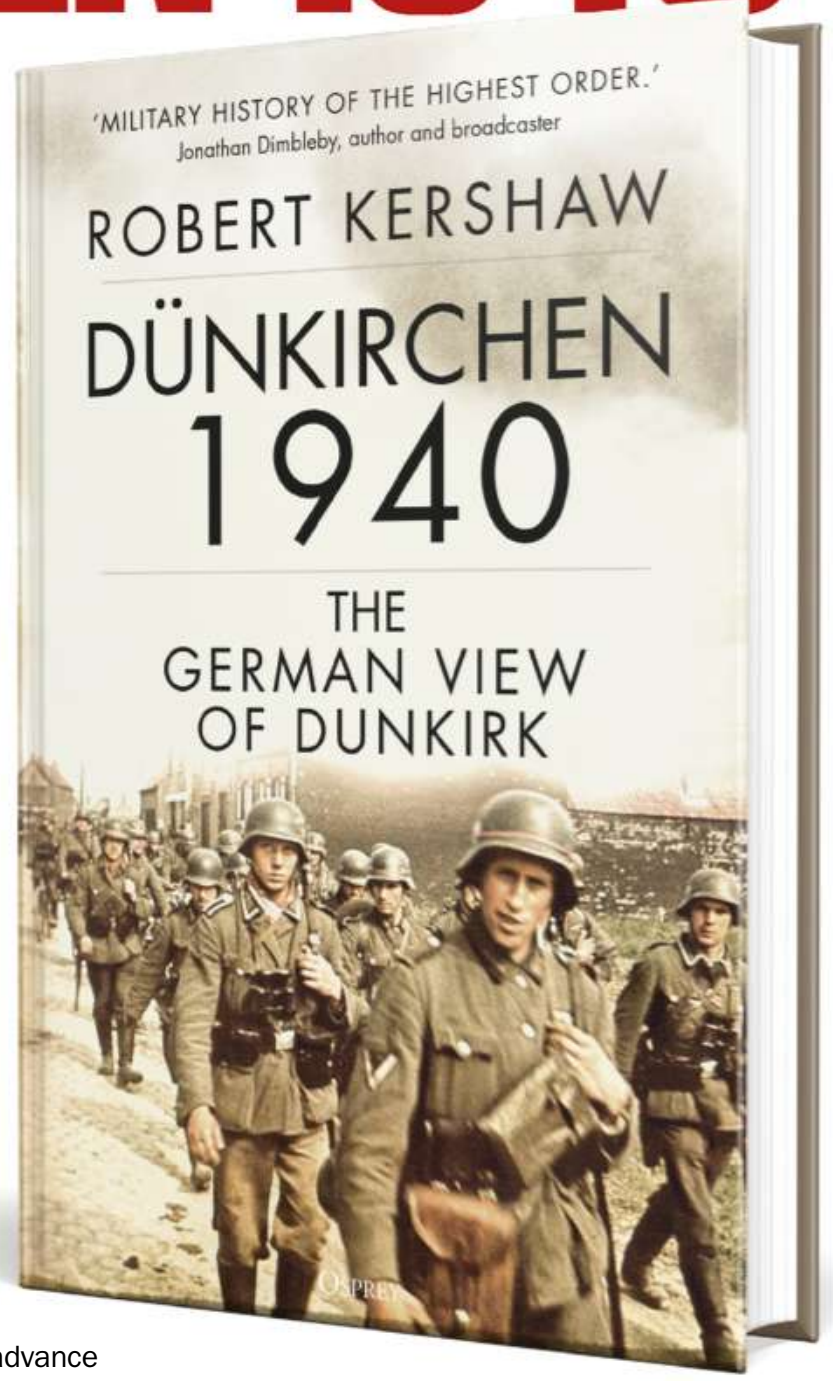
Our pick of the latest military history books

DÜNKIRCHEN 1940

THE GERMAN VIEW OF DUNKIRK

FOR THE BRITISH, DUNKIRK WAS ONE OF THE DEFINING BATTLES OF WWII, THE ARMADA OF 'LITTLE BOATS' SYMBOLISING COURAGE AND DEFIANCE AS THEY RESCUED THE BRITISH EXPEDITIONARY FORCE. BUT HOW DID THE GERMANS VIEW IT?

Author: Robert Kershaw **Publisher:** Osprey **Price:** £20



The author of this intriguing book Robert Kershaw has 'form', having written *It Never Snows in September* and *War Without Garlands*, both accounts of major Second World War battles from a German perspective, the former on Operation Market Garden and the latter the invasion of the Soviet Union. This time round Kershaw has chosen to explore Dunkirk, a battle totally embedded in Britain's Second World War psyche and immortalised in countless films and books – but always from the British standpoint – which makes *Dünkirchen 1940* a daring choice of topic and one Kershaw pulls off handsomely.

As usual Kershaw – an ex-British Army paratrooper – has researched his subject thoroughly and focused on first-hand accounts by ordinary German soldiers – the landsers – although he admits the difficulty of the task given so few of them involved in the battle survived the war, most being killed over the next four years in Russia. Add to this the fact that German forces involved never numbered more than ten divisions, and a relative paucity of accounts is only to be expected. Despite this, Kershaw has been able to unearth enough material to give the reader an excellent feel for the reality of the fighting; this is especially true of the last quarter or so of the book which tells the story of the battle during its final days.

The book begins by placing Dunkirk in the context of Germany's attack on the West, and Kershaw starts as he means to go on by focusing on the campaign from the German side with Hitler's gamble to back Erich von Manstein's radical Sichelschnitt (sickle-cut) plan and invade France through the seemingly impassable Ardennes. Schnelle Heinz (Fast Heinz) Guderian's panzers would then race to the sea, splitting the Allied armies in two and trapping the best of the French and the entire British Expeditionary Force (BEF) in the north of France and Belgium.

Kershaw describes what the German soldiery thought of their opponents as they battled forward, with the French ranging from anywhere between excellent to "an army without spirit and drive", the British as "courageous and disciplined", and the Belgians proving tough nuts to crack. For the Germans the headlong advance was unprecedented, and the author sharply contrasts the success of the Wehrmacht's 1940 offensive with the dismal failure of the Imperial German Army's 1914 invasion of France. The

***Below, left:** German troops at Dunkirk take a rest during the offensive against British and French forces*

***Below, right:** A German soldier observes Allied prisoners of war after the evacuation to Britain was finally halted*

Images © Getty

link between the military efforts of fathers and sons was often tragic, as Helmut Neelsen described when he and his comrades crossed the River Lys under heavy fire: “Our company commander…was severely wounded… He was wounded in the same place where, over 20 years ago his father – who also gave his life for Germany – lies. Shortly after he died himself.”

Given that *Dünkirchen 1940* is from the German viewpoint there is relatively little of the book dedicated to the details of the evacuation and the ‘little boats’. Instead there is a big focus on the Wehrmacht’s attempts to pierce the defensive rearguard – both British and French – and this is entirely appropriate. The narrative also explores aspects of the battle that have often been previously overlooked, including the shock felt by German troops in being the target of RAF ground attack, and the nature of the terrain over which the Germans were forced to attack to try and capture Dunkirk.

Probably the most interesting point the book makes is to question the narrative that it was Hitler’s famous ‘panzer stop’ order – supposedly given against his generals’ advice – that allowed the BEF to escape and robbed Nazi Germany of a decisive victory. Kershaw presents a very good case that the order was only temporary and was strongly approved of by his senior commanders, who were desperately worried by their foot-slogging infantry’s inability to keep up with the blitzkrieg of the new panzer divisions. In this he joins the growing band of modern historians challenging the postwar orthodoxy – propagated by the Wehrmacht’s senior officers – that Germany’s defeat was entirely down to Hitler’s mistakes rather than their own.

Kershaw also, rather bravely, explains to his British readers that Dunkirk wasn’t as important to the Germans as defeating France – their Erzfeind (archenemy), and that, in fact, the Germans saw Dunkirk as secondary compared to a renewed push to take Paris.

Set against this the few niggles in the book; the German Grossdeutschland being referred to as a regiment (which it was at the time) on one page and then as a division on the next, and the SS-Totenkopf being misspelt, are small fry and easily remedied with sharper editing. Overall, Kershaw tells an excellent story from a hitherto neglected viewpoint. **JT**

WIN A COPY OF DÜNKIRCHEN 1940!

We have three copies of Robert Kershaw’s latest book to give away! Visit bit.ly/Dunkirchen or scan the QR code for more details on how you can win.

KUTUZOV

A LIFE IN WAR AND PEACE

FACT-CHECKING THE HERO STATUS OF FIELD MARSHAL KUTUZOV, WHO FOR HALF A CENTURY SERVED IN ALMOST EVERY MAJOR CONFLICT IN WHICH RUSSIA TOOK PART

Authors: Alexander Mikaberidze
Publisher: Oxford University Press
Price: £26.99

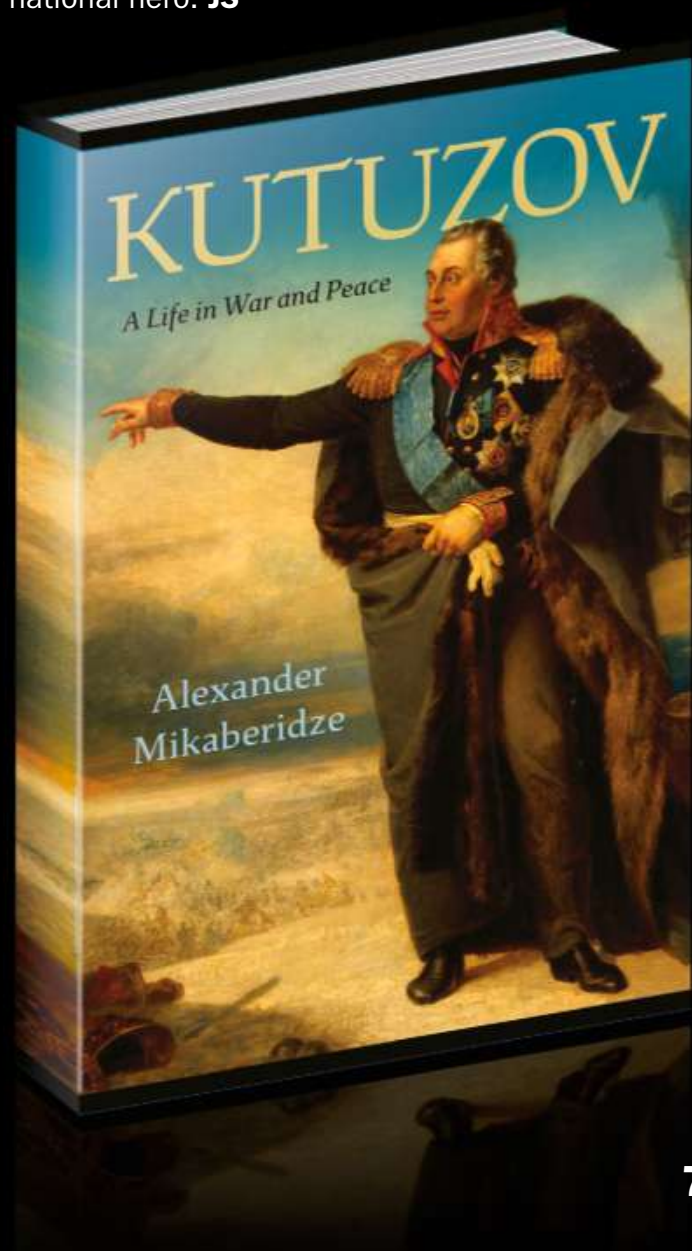
Mikhail Ilarionovich Kutuzov was a military figure whose extraordinary career has been lionised in Russia for more than two centuries. The field marshal led a life of almost ceaseless battlefield exploits. Kutuzov fought against the Polish Confederation of Bar and he served in the Russo-Turkish wars, in which he lost an eye. He took part in the Battle of Austerlitz, which was fought against his advice, and in 1811 he again took command against the Turks and defeated them in a brief and brilliant campaign which resulted in Bessarabia being annexed to Russia. The following year Kutuzov, recently created a prince, replaced Prince Michael Andreas Barclay de Tolly as commander-in-chief against the invading armies of Napoleon I.

Kutuzov is a name that at once is associated with patriotism, but also controversy and historical manipulation, notwithstanding his remarkable battlefield achievements. In 1812, he was expected to give battle to the French and abandon his predecessor Barclay de Tolly’s delaying tactics. The outcome was the bloody Battle of Borodino, which was won by the French, albeit without decisively destroying the Russian forces. After that butchery, which resulted in c.68,000 casualties, Kutuzov pursued Napoleon after the retreat of the Grande Armée from Moscow.

In his extensive biography Alexander Mikaberidze, a prominent historian of the Napoleonic Wars, engages in some enlightening myth-busting. His extensive research brings to the fore assessments that take some of the sheen off Kutuzov’s image as a national hero. One critic challenges the view of Kutuzov actually exercising command over the troops at Borodino, concluding that his role deploying the army for battle was “barely noticeable”. The Kutuzov myth continued to grow unabated, decade after decade, even after the death of Joseph Stalin in 1953. Soviet historians bent over backwards to show that the Russian retreat in 1812 was part of a thoughtful and premeditated strategy, foreshadowing the Soviet “deliberate and planned” withdrawal in 1941. Kutuzov in this way became a crucial figure in the new historical narrative that served political and ideological ends.

For the next four decades, Soviet historians eulogised the field marshal, elevating him to a superhuman status, with a glaring absence of human fault or limitation. Kutuzov’s ‘military genius’ was extolled as superior to Napoleon’s, the defeat at Austerlitz was blamed on allies and foreigners, while Borodino was proclaimed a Russian triumph where Kutuzov had achieved a “complete strategic and tactical victory”.

“He was a man of contrasts, inspiring and exasperating, of considerable personal charm and keen intellect, but calculating and artful,” says Mikaberidze. But as he points out, there was another side. As a commander he was sometimes accused, particularly late in his military career, of being too cautious, even cowardly; yet over his lifetime he displayed great personal courage on the battlefield, where he was twice seriously wounded. Kutuzov became a crucial figure in Russia’s new historical narrative that served political and ideological ends. This way, he was transformed from a flawed figure into a national hero. **JS**



SUB CULTURE

FROM THE US CIVIL WAR TO THE LOSS OF RUSSIA'S KURSK IN 2000, EXPLORE THE ACTIVITIES OF THE SUBMARINE IN COMBAT, COVERT OPERATIONS AND MARINE EXPLORATION

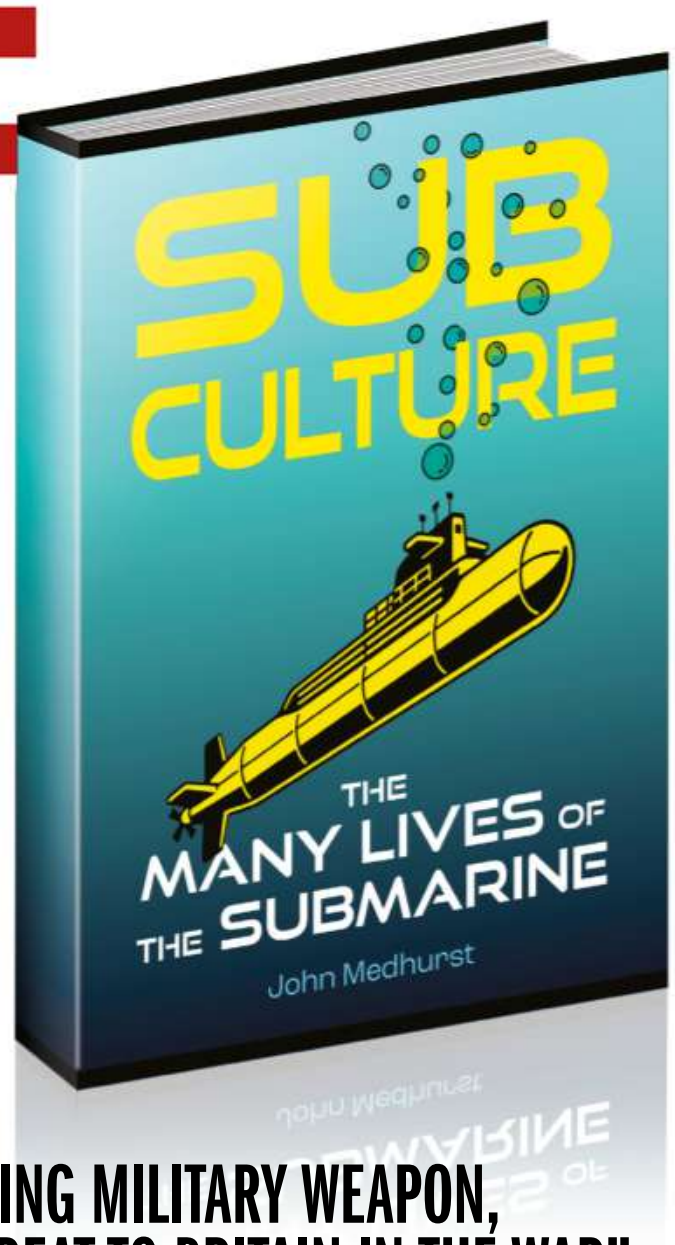
Author: John Medhurst **Publisher:** Reaktion Books **Price:** £16

It sounds like a reasonably straightforward tool of warfare: a naval craft capable of submerging underwater and attacking ships, principally with torpedoes. Yet the submarine, as John Medhurst reveals in his book, is the product of a long and diverse history. The author begins his narrative in the days of Alexander the Great, who was reported to have descended into the Aegean Sea in a glass sphere to observe aquatic life. From there, fast-forward some 2,000 years to Cornelius Drebbel, a 17-century Dutch designer who built a leather-sealed underwater vessel propelled by oarsmen, with a 15-hour oxygen renewal system. The submarine's first recorded military engagement ended in fiasco, when explosives from David Bushnell's Turtle in 1776 failed to penetrate a British warship's copper sheathing in the American War of Independence.

From the mid-19th century to the First World War, submarine design saw many major advances in technology. Engineer John Philip Holland won awards from the US Navy for the best submarine design and his vessel, launched in 1897, remained the basis for submarine design through the first half of the 20th century.

The submarine in popular culture has fired the imagination of novelists and Hollywood alike, from Tom Clancy's *The Hunt for Red October* to the film adaptation of Captain Edward L Beach's novel *Run Silent, Run Deep*. Yet the submarine is intrinsically seen as a terrifying military weapon, the only thing Winston Churchill truly feared as a threat to Britain in the war.

Medhurst maintains that the submarine's mission is not yet complete and ranges beyond covert military operations. Raising the spectre of global disaster, he delves into the role of the submarine as the ultimate deterrent and Doomsday weapon. **JS**



"THE SUBMARINE IS INTRINSICALLY SEEN AS A TERRIFYING MILITARY WEAPON, THE ONLY THING WINSTON CHURCHILL TRULY FEARED AS A THREAT TO BRITAIN IN THE WAR"

PAULINE GOWER

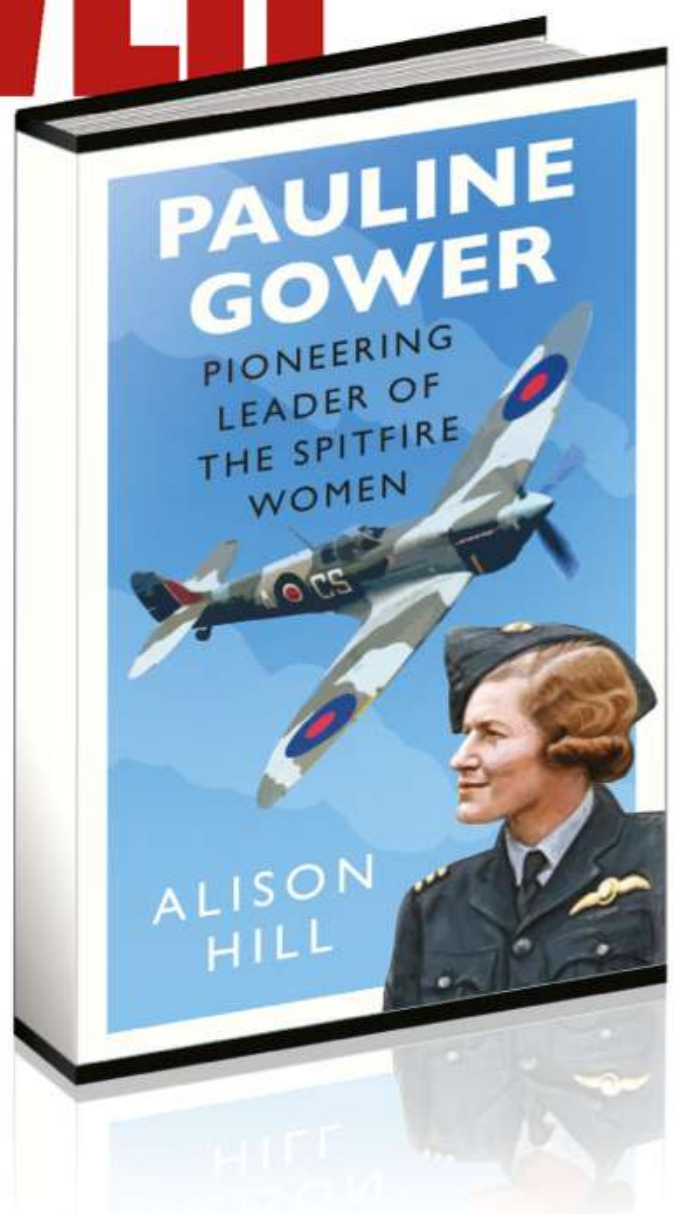
PIONEERING LEADER OF THE SPITFIRE WOMEN

SECOND WORLD WAR SPITFIRE PILOT PAULINE GOWER WAS A LEGENDARY FIGURE WHO PROVIDED INSPIRATION TO FEMALE AVIATORS OF HER DAY AND THOSE WHO FOLLOWED

Author: Alison Hill **Publisher:** The History Press **Price:** £14.99

"Women are not born with wings, neither are men for that matter. Wings are won by hard work, just as proficiency is won in any profession." The words are those of Pauline Gower, the indomitable pilot who became head of the women's branch she had created in the Air Transport Auxiliary (ATA). The ATA was a civilian organisation founded at the outbreak of WWII to ferry planes between factories, maintenance units and frontline squadrons. It was deemed vital to the success of the RAF. More than one-tenth of the aircrew were women, including 164 pilots and four engineers, who came from more than 25 countries to contribute to the war effort. Gower, a pilot with 2,000 flying hours, recruited other women aviators to fly for the first time with the British military. She is credited with having achieved parity pay for female pilots, who'd routinely been paid 80 per cent of the male wage.

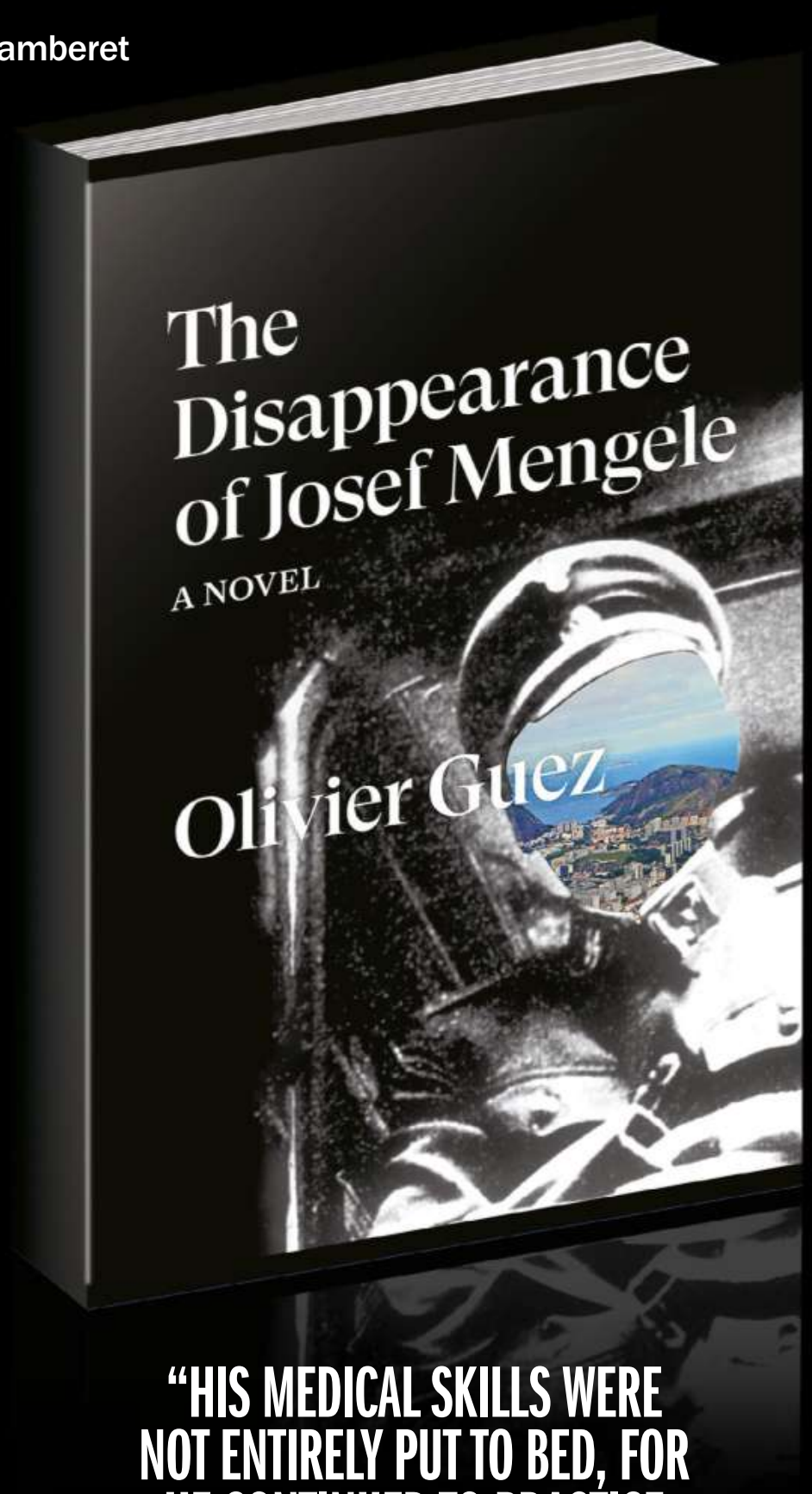
Gower was the first woman to be allowed inside an RAF plane, let alone fly one, but as war drew closer she knew that experienced women pilots could greatly help the war effort and free up men to fly combat missions. Alison Hill takes the reader through Gower's non-stop life, from running an air-taxi service in Kent to publishing a collection of poetry – *Piffling Poems for Pilots* – to training a reserve of British pilots and becoming the first woman on the BOAC board. What more Gower could have achieved in her spectacular career is a matter for speculation, for she died giving birth at the age of 36. **JS**



THE DISAPPEARANCE OF JOSEF MENGELE

THIS AWARD-WINNING NOVEL ABOUT THE INFAMOUS NAZI DOCTOR'S POST-WAR YEARS IN SOUTH AMERICA DELVES INTO THE DOUBLE-LIFE OF ONE OF THE MOST HATED MEN IN HISTORY

Author: Olivier Guez
Translated by: Georgia de Chamberet
Publisher: Verso
Price: £11.99



Today, when one hears the name Josef Mengele, an instant connection to the evil of Auschwitz is made. He was the sadistic doctor who experimented on humans, particularly twins, in the Nazi death camp. Countless people suffered his brutality in the name of medicine, most of whom perished as a result. Despite his horrific crimes, the Allies unwittingly let him go and he fled to South America. Eventually he became a hunted war criminal, but he was never brought to justice, dying in 1979 after suffering a stroke while out swimming at the coastal resort of Bertioga.

The potential reader should note that *The Disappearance of Josef Mengele* by Oliver Guez is a factual novel rather than a traditional history. However, that should not deter those serious about their history from reading this slim tome. Guez, a French journalist and the author of several other books, has rigorously researched his subject, using the existing literature on Mengele as well as tracing the doctor's footsteps in Germany, Argentina and Brazil. The title was originally published in France in 2017, where it won the Prix Renaudot the same year. It has more recently been translated into English by Georgia de Chamberet.

As the title of the book suggests, the story begins in the post-war period with the arrival of Mengele in Argentina. Mengele, of course, fled to South America under the name Helmut Gregor, one of several aliases the former SS doctor and fugitive war criminal would use. He had managed to obtain a passport from the International Committee of the Red Cross in Genoa, and with the assistance of former Nazis and Nazi sympathisers, Mengele was able to start his new life. Nevertheless, his wife Irene had refused to go with him, and so he entered his newly adopted country alone.

"HIS MEDICAL SKILLS WERE NOT ENTIRELY PUT TO BED, FOR HE CONTINUED TO PRACTICE ILLEGALLY, PERFORMING ABORTIONS FOR MONEY"

***Above:** Photo taken by a police photographer in 1956 in Buenos Aires for Mengele's Argentine identification document*

As Guez points out, Argentina was a hotbed of Nazis during the immediate post-war period, with President Juan Perón welcoming anyone who would assist in the development of his country. This allowed Mengele to blend in and become virtually invisible. So comfortable did Mengele become in Argentina that he even reverted to his real name and acted as a salesman in South America for his family's farm machinery business back in Germany. Nevertheless, his medical skills were not entirely put to bed, for he continued to practice illegally, performing abortions for money.

Mengele had been identified by Rudolf Höss, the former commandant of Auschwitz, at the Nuremberg Trials, but the Allies had presumed this obscure doctor was likely dead. However, Mengele's wife demanded a divorce and the divorce papers were later found by Nazi hunters, proving he was still alive. Mossad, following its successful capture of Adolf Eichmann, turned their attention to Mengele. West Germany issued extradition papers, but Mengele fled to Paraguay.

Unfortunately, the Nazi hunters did not catch up with Mengele and he remained a wanted man until his death, aged 67. Guez expertly and sensitively traces the final years of one of the most detested men in history. **MS**

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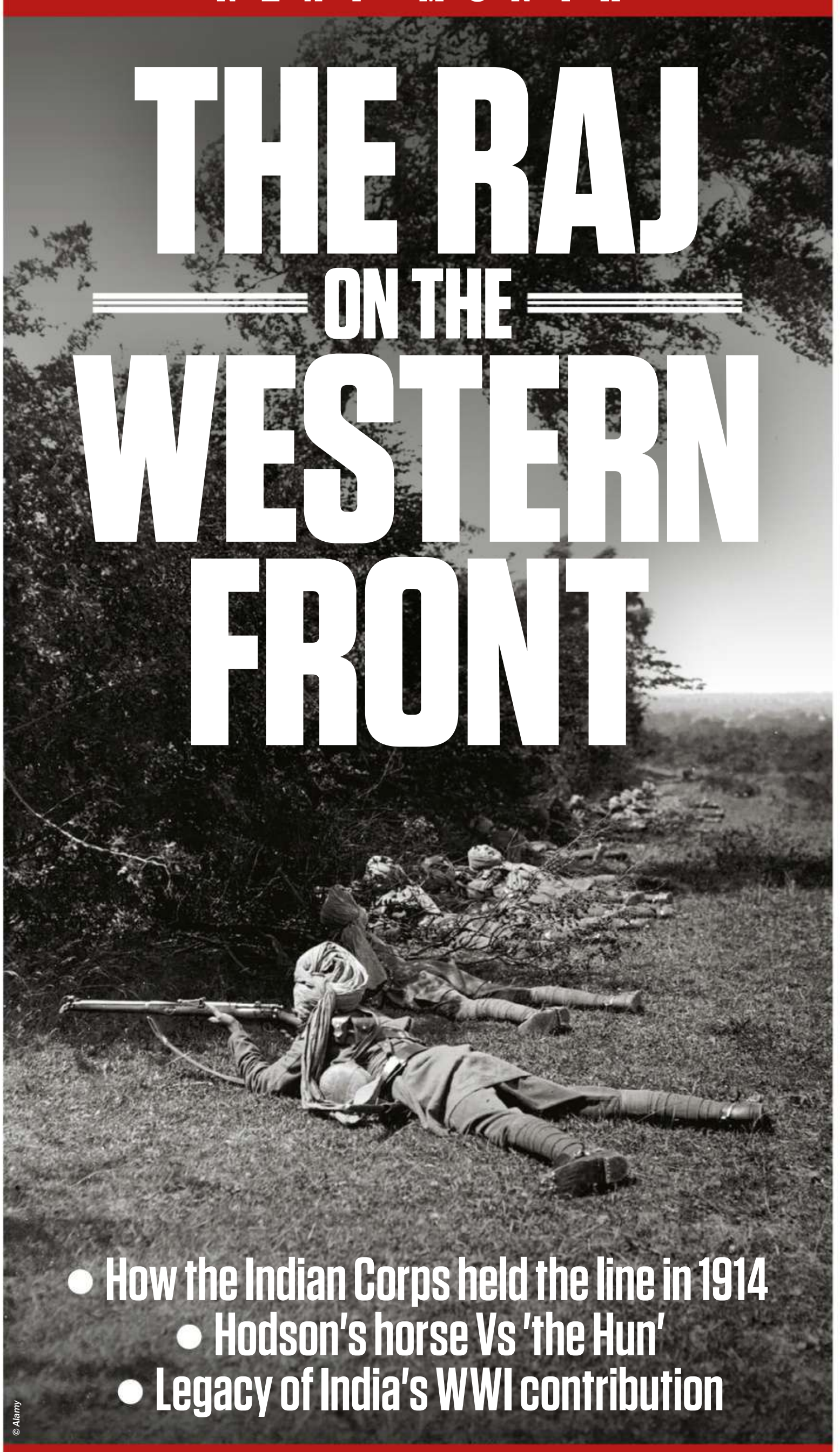
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BURGUNDIAN SHIELD

This 15th century pavise was decorated with the flag of a powerful but now extinct European state

During the Late Middle Ages, Burgundy was one of the richest states in Europe. Although it was technically semi-independent and owed allegiance to the French king, Burgundy's ducal Valois rulers were known as the Grand Dukes of the West. Their territories covered not just their homeland in eastern France but also the Low Countries, Luxembourg and parts of western Germany. The state's power was symbolised by its heraldic use of the Cross of Burgundy. A red saltire, the cross represented Saint Andrew – Burgundy's patron saint – and it was used as a battle flag by Burgundian soldiers.

By the 1470s, the Burgundian State was at its zenith under the rule of Duke Charles the Bold and it was in c.1474-75 that this shield was made. Known as a pavise, this rectangular shield was positioned on the ground for cover and was probably used by crossbowmen. Charles commanded a regular army and it is mostly likely that the pavise was made for combat in his wars against the Swiss.

Known as the Burgundian Wars, these conflicts were fought during 1474-77 and saw the dramatic destruction of Burgundy. Despite the professional organisation of his army, Charles was defeated several times by numerically inferior Swiss infantry. He was finally killed by a Swiss pikeman at the Battle of Nancy in 1477, and with his death the Burgundian State was divided between France and the Holy Roman Empire. The Cross of Burgundy is still used by the present-day Spanish monarchy, which traces its descent from Burgundian Habsburgs, and is also the symbol of many Spanish Army units.

RIJKS MUSEUM

The shield is on display at the Rijksmuseum, the national museum of the Netherlands in Amsterdam. For more information on its collections visit:

www.rijksmuseum.nl

***Right:** The Cross of Burgundy has similarities with the national flag of Scotland because they both share Saint Andrew as a patron saint*

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